ORDER NO. VMD0207046C8

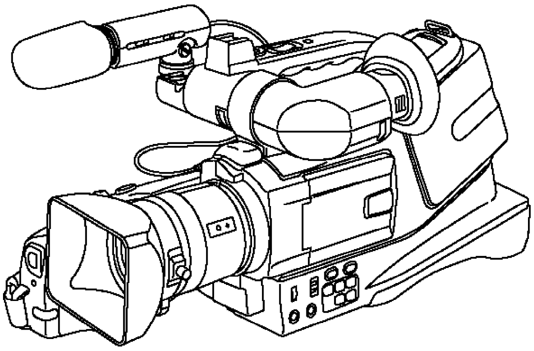
Service Manual

Digital Video Camera/Recorder

Panasonic Mini DV PAL

NV-MD9000EN

N-MECHANISM



SPECIFICATIONS

SPECIFICATIONS

Digital Video Camera

ITEM	SPECIFICATION	ITEM	SPECIFICATION
POWER	Source: DC 7.9 / 7.2 V Consumption: Recording 3.0 W (When using Viewfinder) 3.8 W (When using LCD Monitor)	STANDARD ILLUMINATION	1,400 lx
		MINIMUM REQUIRED ILLUMINATION	1 lx (Digital Gain-up Mode)
RECORDING FORMAT	Mini DV (Consumer-use Digital Video SD Format)	DIGITAL INTERFACE	DV Input/Output Terminal (IEEE1394, 4-pin)
TAPE USED	6.35 mm digital video tape	MICROPHONE	Stereo
RECORDING / PLAYBACK TIME	SP mode: 80 min. with DVM80 LP mode: 120 min. with DVM80	SPEAKER	1 round speaker φ20 mm
CAMERA	Filter Diameter: 43 mm	OPERATING TEMPERATURE	0 - 40 °C
	Zoom: 15:1 Power Zoom	OPERATING HUMIDITY	10 - 80 %
	Monitor: 2.5-inch LCD	WEIGHT	Approx. 2000 g(without Battery and DV Cassette) Approx. 2100 g(with Supplied Battery and DVM60)
	Lens: Auto Iris, F1.8, Focal Length; 3.1 - 46.5 mm Macro (Full Range AF)	DIMENSIONS	Approx. 213 (W) x 225 (H) x 432 (D) mm
	Image Sensor: 1/4-inch CCD Image Sensor	STANDARD ACCESSORIES	1 pc. AC Adaptor 1 pc. Battery Pack Unit 1 pc. Button-type Battery 1 pc. Battery 2 pc. AC Cord 1 pc. DC Cable 1 pc. S-Video Cable 1 pc. AV Cable 1 pc. Shoulder Belt 1 pc. Remote Controller 1 pc. External Stereo Microphone 1 pc. Head Cleaner
	Viewfinder: Colour Electronic Viewfinder		
VIDEO	Recording System: Digital Component		
	Television System: CCIR: 625 Lines, 50 Fields PAL Colour Signal		
	Video Output Level: 1.0 Vp-p, 75Ω S-Video Output Level: Y Output; 1.0 Vp-p, 75Ω C Output; 0.3 Vp-p, 75Ω Video Input Level: 1.0 Vp-p, 75Ω S-Video Input Level: Y Input; 1.0 Vp-p, 75Ω C Input; 0.3 Vp-p, 75Ω		
AUDIO	Recording System: PCM Digital Recording 16 bit (48 kHz/2 ch) 12 bit (32 kHz/4 ch)	SOLDER	This model use lead free solder (PbF).
	Audio Output Level (Line): 316 mV, 600Ω Audio Input Level (Line): 316 mV, 10 kΩ or more Mic Input: Mic sensitivity -50dB(0dB=1V/Pa,1kHz) (Stereo Mini Jack)		

Weight and dimensions are approximate values.
Specifications may change without prior notice.

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic

1. INTRODUCTION

1.1. INTRODUCTION

This service manual contains technical information which will allow service personnel's to understand and service this model.Please place orders using the parts list and not the drawing reference numbers.
If the circuit is changed or modified, this information will be followed by supplement service manual to be filed with original service manual.
Information for N-Mechanism should be referd to the another manual as below.
Order No. : VMD0105012C8
Information for MIC should be referd to the another manual as below.
Order No. : VMD0209047C8

Note 1:
These movie cameras use AC Adaptor is VSK0581-A.
The service manual for AC Adaptor is separate volume.
Order number for AC Adaptor ....VSK0581-A : VMD0105013C8

Note 2:
1) This service manual does not contain the following information, because of the impossibility of sevicing at component level.

1. Schematic Diagram, Block Diagram and C.B.A. layout of Main C.B.A./ Mother C.B.A.

2. Parts List for individual parts of Main C.B.A./ Mother C.B.A.

3. Exploded View and Parts List for individual parts of Mechanism Unit.

2) The following category are recycle module part. Please send them to Central Repair Center.
***Main C.B.A. (VEP03F85F)**
***Mother C.B.A. (VEP06F10A)**

When a part replacement is required for repairing each Main C.B.A. and/ or Mechanism block, replace the assembly parts.
(Main C.B.A., Mother C.B.A. and/ or Mechanism Unit)
The following circuits are contained in Main C.B.A.

1. Main Connection Circuit

2. Drive Circuit

3. Video 1 Circuit

4. Video 2 Circuit

5. Control Circuit

6. LCD Circuit

7. Head/ Rec Amp Circuit

8. Power Circuit

9. Camera Circuit

10. Lens Drive Circuit

The following circuits are contained in Mother C.B.A.

1. Mother Connection Circuit

2. Ex Input Circuit

3. HP Amp Circuit

4. MF Ring Circuit

About lead free solder (PbF)

Distinction of PbF PCB:
PCBs (manufactured) using lead free solder will have a PbF stamp on the PCB.

Caution:

- **Pb free solder has a higher melting point than standard solder; Typically the melting point is 50-70°F (30-40°C) higher. Please use a high temperature soldering iron. In case of the soldering iron with temperature control,please set it to 700±20°F (370±10°C).**
- **Pb free solder will tend to splash when heated too high (about 1100°F/ 600°C).**

When soldering or unsoldering, please completely remove all of the solder on the pins or solder area, and be sure to heat the soldering points with the Pb free solder until it melts enough.

2. CAUTION FOR AC CORD (VJA0940 TYPE)

2.1. INFORMATION FOR YOUR SAFETY

IMPORTANT
Your attention is drawn to the fact that recording of pre-recorded tapes or discs or other

published or broadcast material may infringe copyright laws.

WARNING

To reduce the risk of fire or shock hazard, do not expose this equipment to rain or moisture.

CAUTION

To reduce the risk of fire or shock hazard and annoying interference, use the recommended accessories only.

FOR YOUR SAFETY

DO NOT REMOVE THE OUTER COVER

To prevent electric shock, do not remove the cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

2.2. CAUTION FOR AC MAINS LEAD

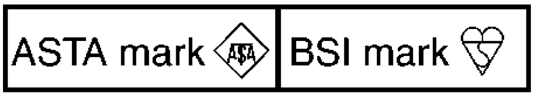
For your safety, please read the following text carefully.

This appliance is supplied with a moulded three-pin mains plug for your safety and convenience.

A 5-ampere fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5 amperes and it is approved by ASTA or BSI to BS1362

Check for the ASRA mark or the BSI mark on the body of the fuse.



If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover, the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local Panasonic Dealer.

If the fitted moulded plug is unsuitable for the socket outlet in your home then the fuse should be removed and the plug cut off and disposed of safety.

There is a danger of severe electrical shock if the cut off plug is inserted into any 13-ampere socket.

If a new plug is to be fitted please observe the wiring code as shown below.

If in any doubt, please consult a qualified electrician.

2.2.1. Important

The wires in this mains lead are coloured in accordance with the following code:

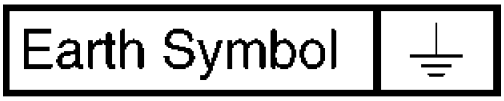
Blue	Neutral
Brown	Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

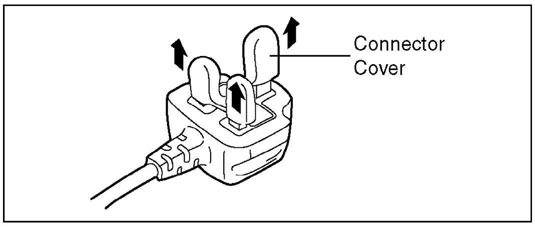
The wire which is coloured BROWN must be connected to the terminal in the plug which is

marked with the letter L or coloured RED.
Under no circumstances should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth Symbol.



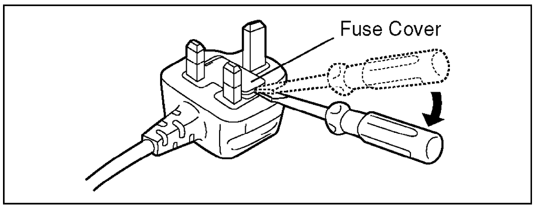
2.2.2. Before use

remove the Connector Cover as follows.

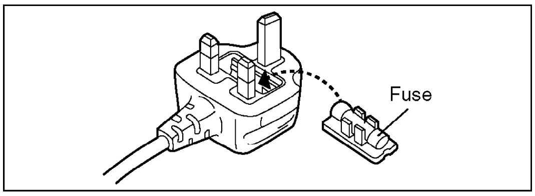


2.2.3. How to replace the Fuse

1. Remove the Fuse Cover with a screwdriver.



2. Replace the fuse and attach the Fuse cover.



3. SERVICE CAUTION

3.1. EEPROM DATA FOR SPARE PARTS OF THE MAIN C.B.A.

When the Main C.B.A. is replaced, the fixed and average data must be changed by Tatsujin kit according to the Movie Camera's suffix.
Then, confirm and/or adjust the VTR and Camera section one by one.

3.2. SERVICE EXTENSION CABLES

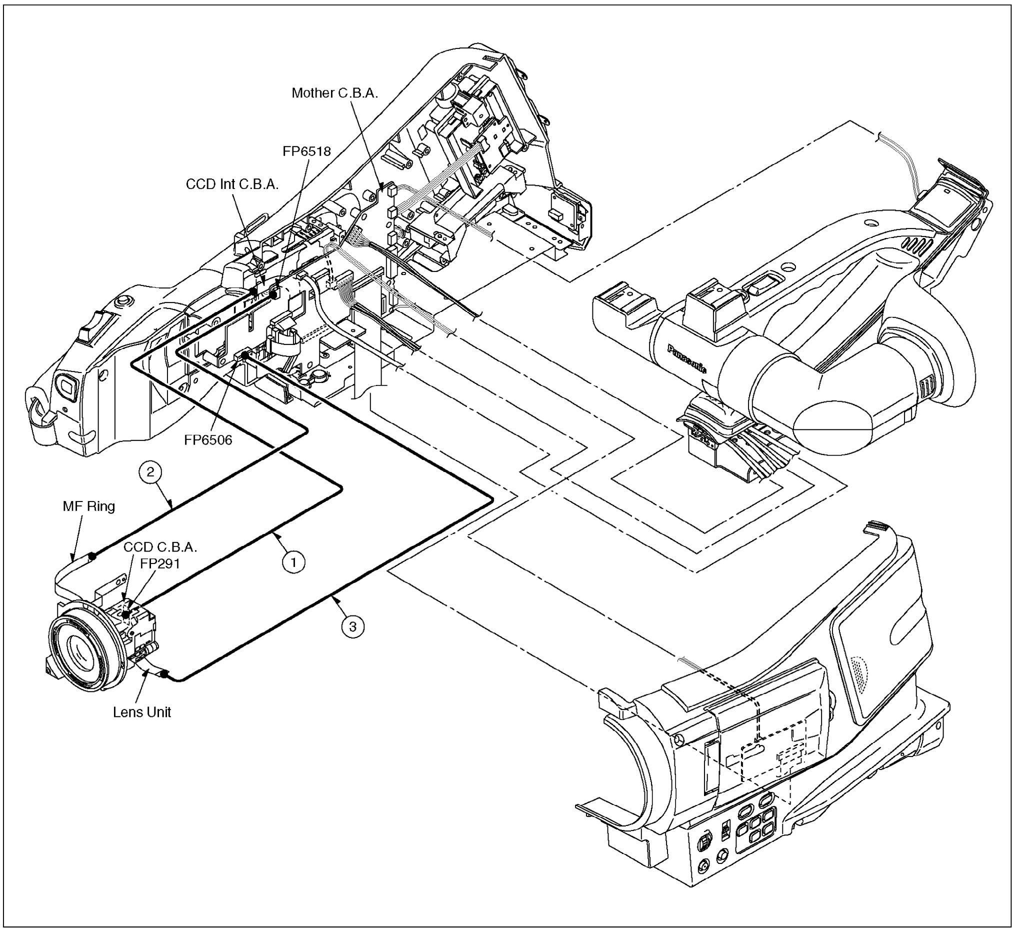
This models is required the following extension cables for all connections.

Note 1:
Use the following extension cables when checking or adjusting individual circuit boards except module Parts.
(Main C.B.A. and Mother C.B.A.)

Ref.	Part No.	Pin	Part Name	Connection	Q'ty	Remarks
(1)	VFK1364	14	Flat Cable	FP291 (CCD) - CCD Int	1	as NV-DS55
(2)	VFK1758	5	Flat Cable	FP6518 (Mother) - MF Ring	1	as NV-GS5K
(3)	VFK1282	22	Flat Cable	FP6506 (Mother) - Lens Unit	1	as NV-DX1

How to use extension cables.

Fig. T1-1


Mother C.B.A.
FP6518
CCD Int C.B.A.
FP6506
②
MF Ring
CCD C.B.A.
FP291
①
③
Lens Unit

3.3. LOCATION FOR SPARE CONNECTORS OF THE MAIN C.B.A. & MOTHER C.B.A.

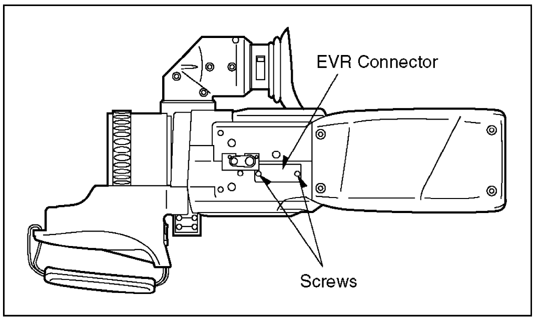
3.3.1. MAIN C.B.A.

3.3.2. MOTHER C.B.A.

4. PREPARATION FOR ELECTRICAL ADJUSTMENT

1. **Unlock the locking tab and remove the EVR connector as shown in Fig. E1 .**
2. **Then connect the following cables as shown in Fig. E2 .**

Fig. E1


EVR Connector
Screws

Part No.	Part Name	Q'ty	Remarks
VFK1395	232C(M3)I/F Cable	1	
VFK1308E	Measuring Board	1	
VFK1309	EVR Connector Board	1	
VFK1317	30 pin Flat Cable	2	
VJA0941	DC Output Cable	1	For AC Adaptor
VFK1164TAR43	Setup Ring	1	For Collimator
VFK1714	Connection Adaptor (30pin)	3	
VFK1763	Connection Adaptor (60-30pin)	1	

Fig. E2

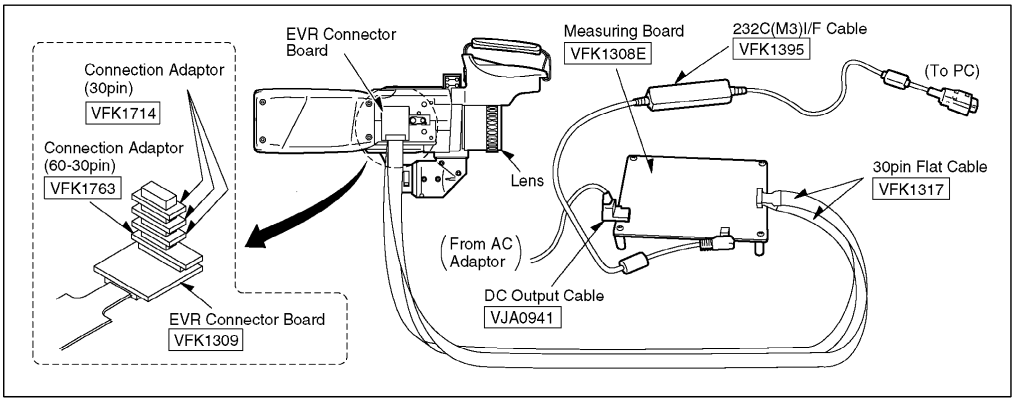
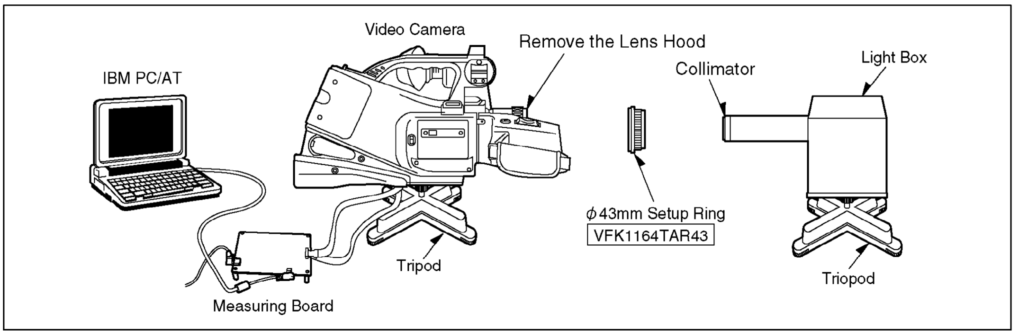

Connection Adaptor (30pin)
VFK1714
Connection Adaptor (60-30pin)
VFK1763
EVR Connector Board
VFK1309
EVR Connector Board
Measuring Board
VFK1308E
232C(M3)I/F Cable
VFK1395
(To PC)
Lens
30pin Flat Cable
VFK1317
From AC Adaptor
DC Output Cable
VJA0941

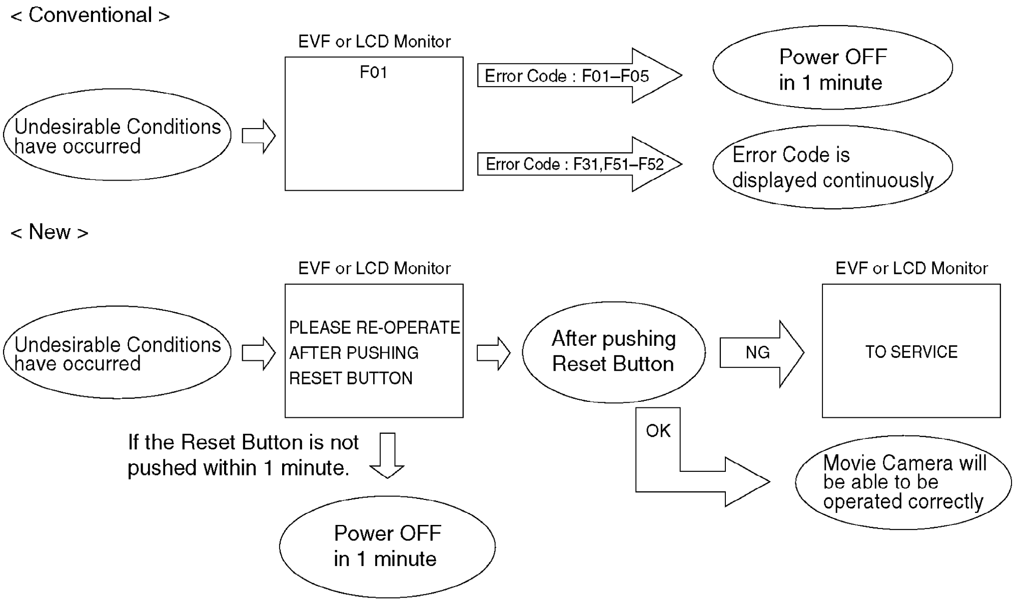
Fig. E3


Video Camera
Remove the Lens Hood
Collimator
Light Box
IBM PC/AT
ϕ43mm Setup Ring
VFK1164TAR43
Tripod
Triopod
Measuring Board

5. SERVICE MODE

5.1. New Error Code Display

Conventionally, the error code has been displayed automatically on the EVF or LCD Monitor when undesirable conditions have occurred. With the New Error Code Display, the error code has not been displayed automatically as follows except some error codesF31(Data Transmission Error), U10(Dew) and U11(Head Clogging).


< Conventional >
EVF or LCD Monitor
F01
Undesirable Conditions have occurred
Error Code : F01–F05
Power OFF in 1 minute
Error Code : F31,F51–F52
Error Code is displayed continuously
< New >
EVF or LCD Monitor
Undesirable Conditions have occurred
PLEASE RE-OPERATE AFTER PUSHING RESET BUTTON
After pushing Reset Button
NG
EVF or LCD Monitor
TO SERVICE
OK
Movie Camera will be able to be operated correctly
If the Reset Button is not pushed within 1 minute.
Power OFF in 1 minute

Note:

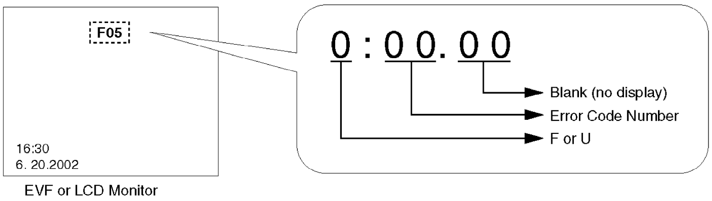
1. **The only some error codes F31, U10 and U11 has displayed automatically on the EVF or LCD monitor as usual.**
2. **The Power LED also has been flashed for 1 min. when undesirable condetions have occurred.(See below)**

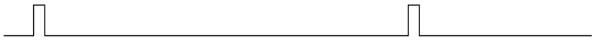
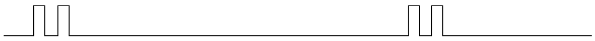
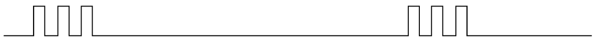
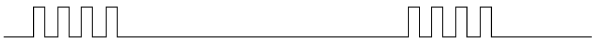
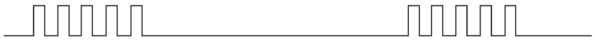
5.2. Viewing Error Code

When displaying the Error Code on the EVF or LCD Monitor, push the FADE/STOP and REC START/PAUSE buttons simultaneously for more 3 seconds.

Note:

When the cassette tape is inserted, this operation will not be worked.



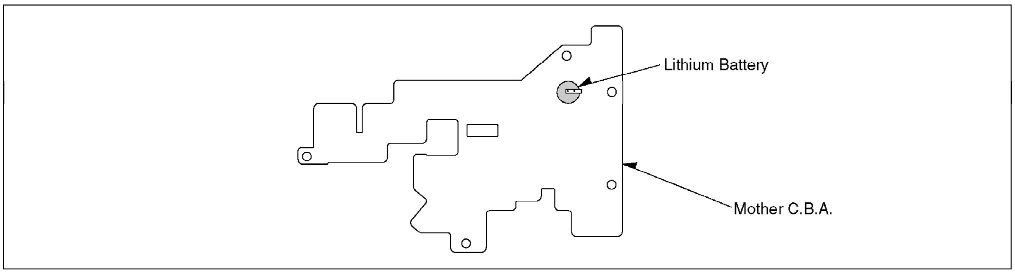
DISPLAY	CONDITION	POWER OFF TIMING / POWER LED FLASHING TIMING
F01	T-Reel Lock	After 1 minute flashing the LED 
F02	S-Reel Lock	After 1 minute flashing the LED 
F03	Unloading Lock	After 1 minute flashing the LED 
F04	Loading Lock	After 1 minute flashing the LED 
F05	Cylinder Lock	After 1 minute flashing the LED 
F31	Data Transmission Error	Not turning OFF
F51	Zoom Motor Lock	Not turnig OFF Power LED is flashed at 1 Hz timing
F52	Focus Motor Lock	Not turnig OFF Power LED is flashed at 1 Hz timing
U10	Dew Detection	After 18 seconds flashing the LED Power LED is flashed at 1 Hz timing
U11	Head Clogging	Not turning OFF

6. HOW TO REPLACE THE LITHIUM BATTERY (PROCEDURE)

1. Remove the Mother C.B.A.. (Refer to Disassembly Procedures.)

2. Unsolder the Lithium Battery “ML920S” and then replace the new one. (See Fig. B1 .)

Fig. B1



Note:

The lithium battery is a critical component. (Type No.: ML920S Manufactured by Panasonic.)
It must never be subjected to excessive heat or discharge.
It must therefore only be fitted in equipment designed specifically for its use.
Replacement batteries must be of the same type and manufacture.
They must be fitted in the same manner and location as the original battery, with the correct polarity contacts observed.
Do not attempt to re-charge the old battery or re-use it for any other purpose.
It should be disposed of in waste products destined for burial rather than incineration.

CAUTION

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended by the equipment manufacturer.
Discard used batteries according to manufacturer's instructions.

PRECAUTION

Le fait de remplacer incorrectement la pile peut présenter des risques d'explosion.
Remplacer la pile uniquement par une pile identique ou de type équivalent recommandée par le fabricant. Se débarrasser des piles usagées conformément aux instructions du fabricant.

VORSICHT

Bei einer falsch eingesetzten Batterie besteht Explosionsgefahr. Nur mit einer vom Hersteller empfohlenen Batterie vom gleichen Typ ersetzen.
Verbrauchte Batterien beim Fachhändler oder einer Sammelstelle für Sonderstoffe abliefern.

VARNING

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens instruktion.

ADVARSEL!

Lithiumbatteri-Eksplosionsfare ved fejlagtig håndtering.
Udskiftning má kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandøren.

VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin.
Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

7. OPERATING GUIDE

8. ADJUSTMENT PROCEDURES

8.1. DISASSEMBLE FLOW CHART

This flow chart indicates the disassembly steps the cabinet parts, C.B.A. and Mecha. Unit in order to access to be serviced. When reinstalling, perform the steps in the reverse order.

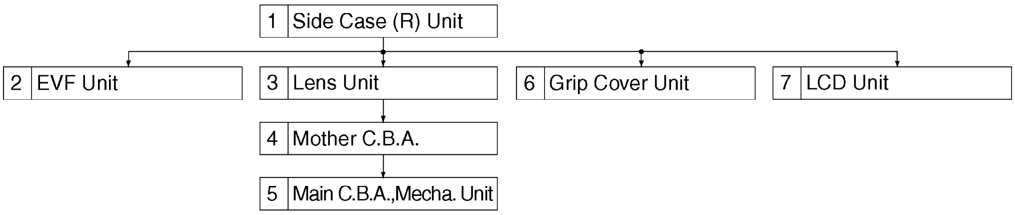
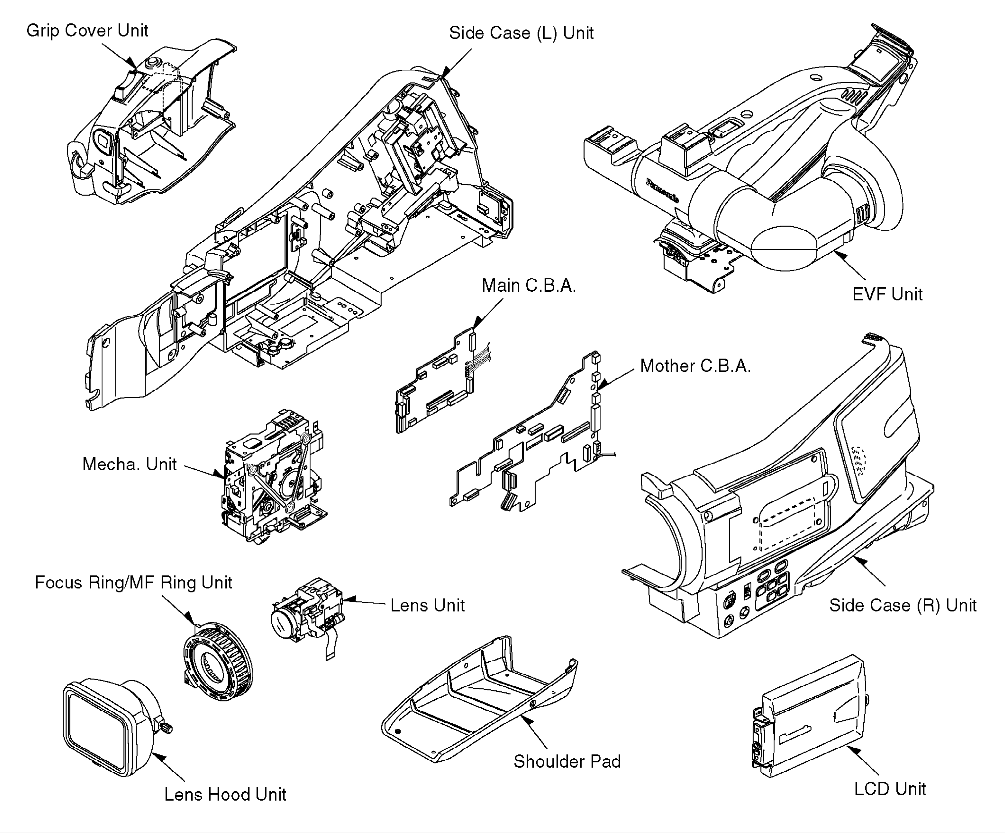


Fig. F1


Grip Cover Unit
Side Case (L) Unit
EVF Unit
Main C.B.A.
Mother C.B.A.
Mecha. Unit
Focus Ring/MF Ring Unit
Lens Unit
Side Case (R) Unit
Shoulder Pad
Lens Hood Unit
LCD Unit

8.2. DISASSEMBLY PROCEDURES

Flow-Chart for Disassembly Procedure

No.	Item/Part	Fig.	Removal (Screw, Connector, Flex. & Other)
1	Side Case (R) Unit	Fig. D1	8-Screws (A) Face Panel Shoulder Pad
		Fig. D2	3-Screws (B) 2-Screws (C) 4-Screws (D) 1-Screw (E) 2-Connectors FP6516/ P6701 Side Case (R) Unit

No.	Item/Part	Fig.	Removal (Screw, Connector, Flex. & Other)
2	EVF Unit	Fig. D3	4-Screws (F) 4-Connectors FP6520/ P6514 / P6517/ PP6508
		Fig. D4	2-Screws (G) Mic Unit
		Fig. D5	2-Screws (H) 4-Screws (I) Handle Unit Shoe
		Fig. D6	2-Screws (J) Slide Cover EVF Unit
3	Lens Unit	Fig. D7	Lens Hood Unit 1-Screw (K) 4-Tabs ND Filter Case Unit
		Fig. D8	Focus Ring 3-Screws (L) 1-Screw (M) 2-Screws (N) Lens Case (R) Unit
		Fig. D9	2-Screws (O) 1-Screw (P) 3-Connectors FP6506/ FP6518/ PP201
		Fig. D10	2-Screws (Q) MF Ring Unit 2-Screws (R) Lens Frame 1-Connector FP291 Lens Unit
4	Mother C.B.A.	Fig. D11	4-Screws (S) 4-Dumper Rubbers 1-Screw (T) 16-Connectors FP6503/ FP6504 /FP6505/ FP6507/ FP6509/ FP6511/ FP6518/ FP6521/ P6510/ P6512/ P6513/ P6515/ P6517/ P6519/ P6520/ PP6501 MotherC.B.A.

No.	Item/Part	Fig.	Removal (Screw, Connector, Flex. & Other)
5	Main C.B.A., Mecha. Unit	Fig. D12	2-Screws (U) Cassette Cover Unit 3-Screws (V) 1-Connector P6751 2-Screws (W) EVR Int C.B.A.
		Fig. D13	1-Screw (X) 4-Connectors FP2201/ FP2202/ FP2203/ FP5001 Main C.B.A. 3-Screws (Y) Mecha. Unit
6	Grip Cover Unit	Fig. D14	4-Screws (Z) Grip Cover Unit
7	LCD Unit	Fig. D15	2-Screws (a) 4-Screws (b) 1-Screw (c) 1-Screw (d) Hinge Earth Plate 1-Connector FP6702 LCD Unit

Fig. D1

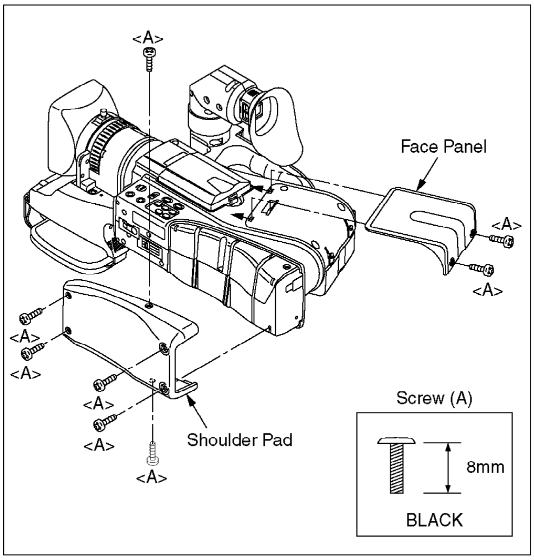


Fig. D2

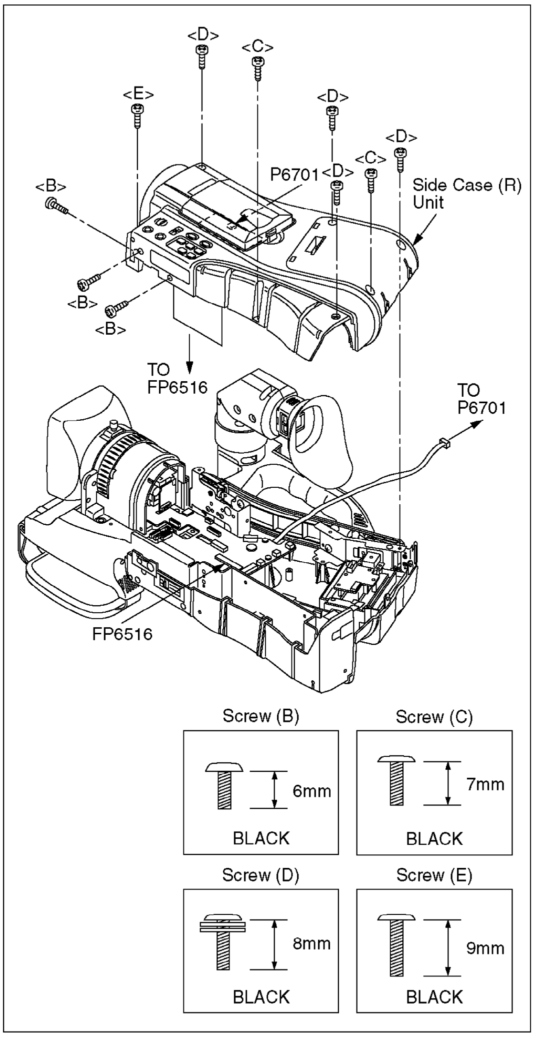

<D>
<C>
<E>
<D>
<D>
P6701
<D>
<C>
<B>
Side Case (R)
Unit
<B>
<B>
TO
FP6516
TO
P6701
FP6516
Screw (B)
6mm
BLACK
Screw (C)
7mm
BLACK
Screw (D)
8mm
BLACK
Screw (E)
9mm
BLACK

Fig. D3

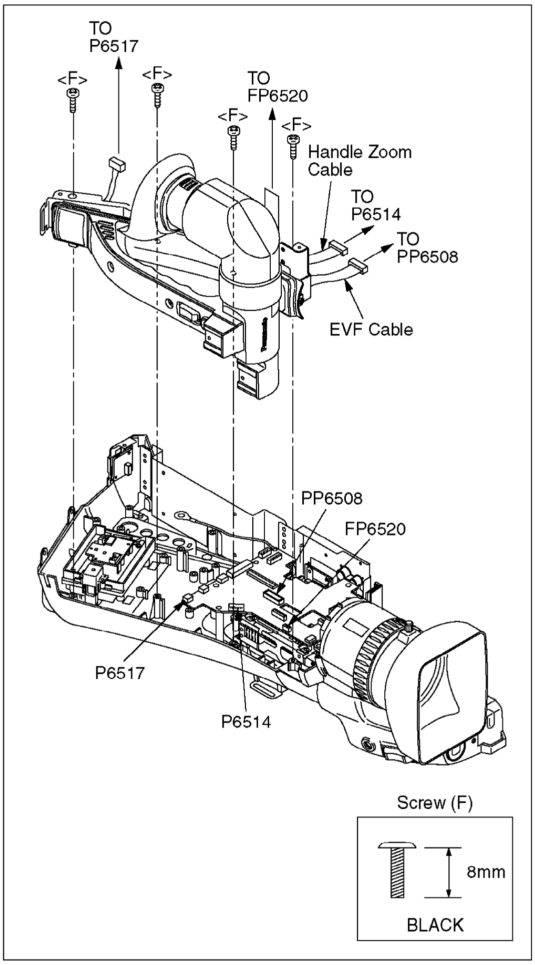

TO
P6517
<F>
<F>
TO
FP6520
<F>
<F>
Handle Zoom
Cable
TO
P6514
TO
PP6508
EVF Cable
PP6508
FP6520
P6517
P6514
Screw (F)
8mm
BLACK

Fig. D4

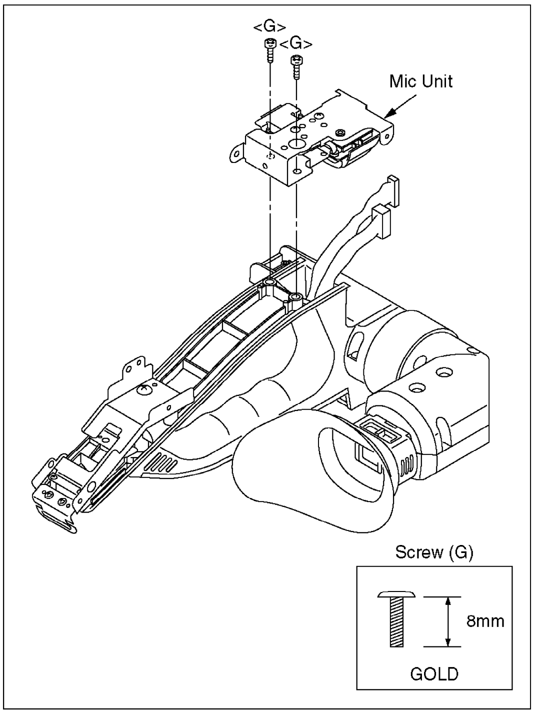

<G>
<G>
Mic Unit
Screw (G)
8mm
GOLD

Fig. D5

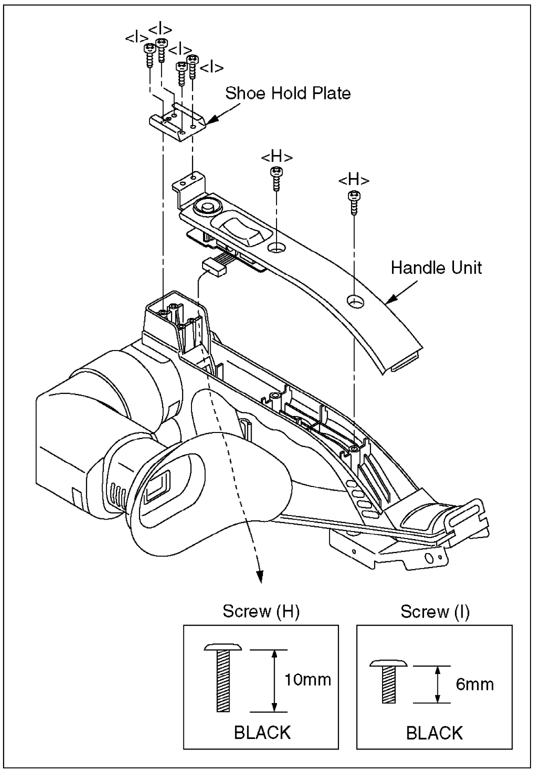

<I>
<I>
<I>
<I>
<I>
Shoe Hold Plate
<H>
<H>
Handle Unit
Screw (H)
10mm
BLACK
Screw (I)
6mm
BLACK

Fig. D6

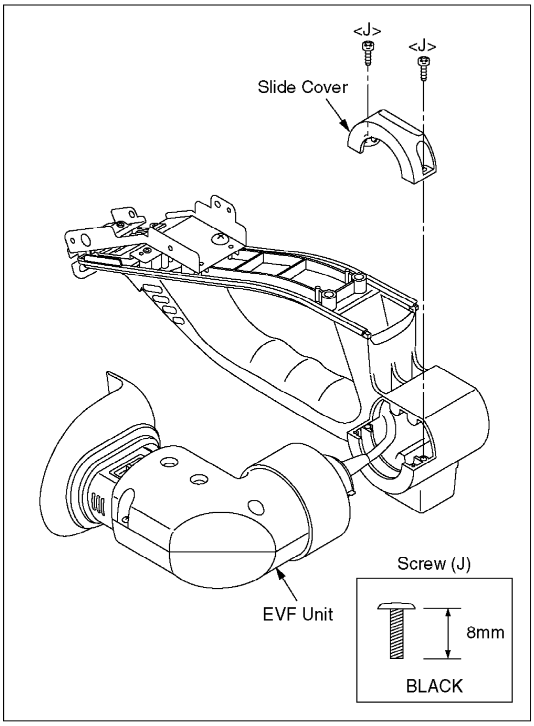

<J>
<J>
Slide Cover
EVF Unit
Screw (J)
8mm
BLACK

Fig. D7

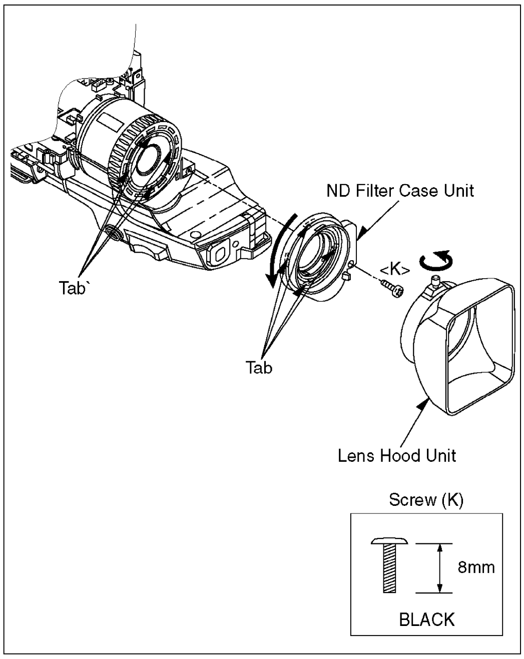

ND Filter Case Unit
Tab`
<K>
Tab
Lens Hood Unit
Screw (K)
8mm
BLACK

Fig. D8

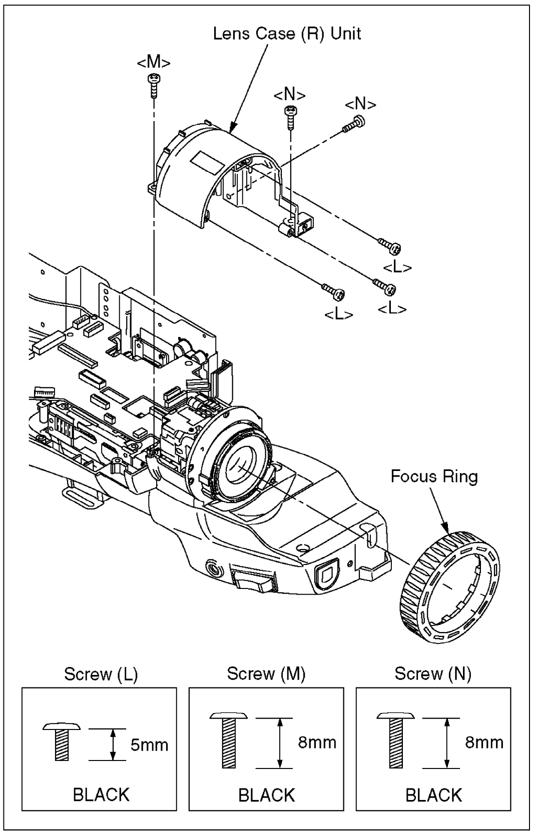

Lens Case (R) Unit
<M>
<N>
<N>
<L>
<L>
<L>
Focus Ring
Screw (L)
5mm
BLACK
Screw (M)
8mm
BLACK
Screw (N)
8mm
BLACK

Fig. D9

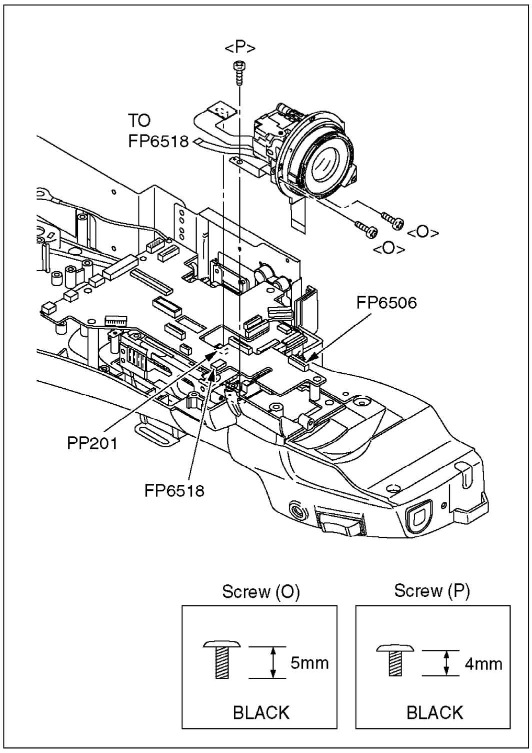

<P>
TO FP6518
<O>
<O>
FP6506
PP201
FP6518
Screw (O)
5mm
BLACK
Screw (P)
4mm
BLACK

Fig. D10

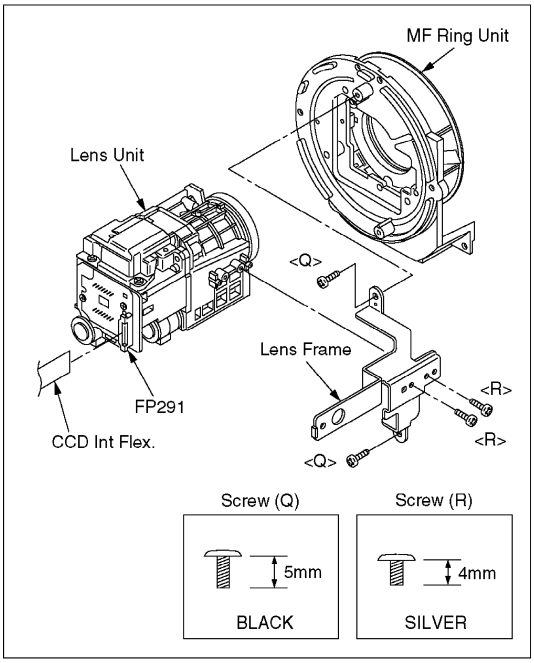

MF Ring Unit
Lens Unit
<Q>
Lens Frame
<R>
<R>
FP291
CCD Int Flex.
<Q>
Screw (Q)
5mm
BLACK
Screw (R)
4mm
SILVER

Fig. D11

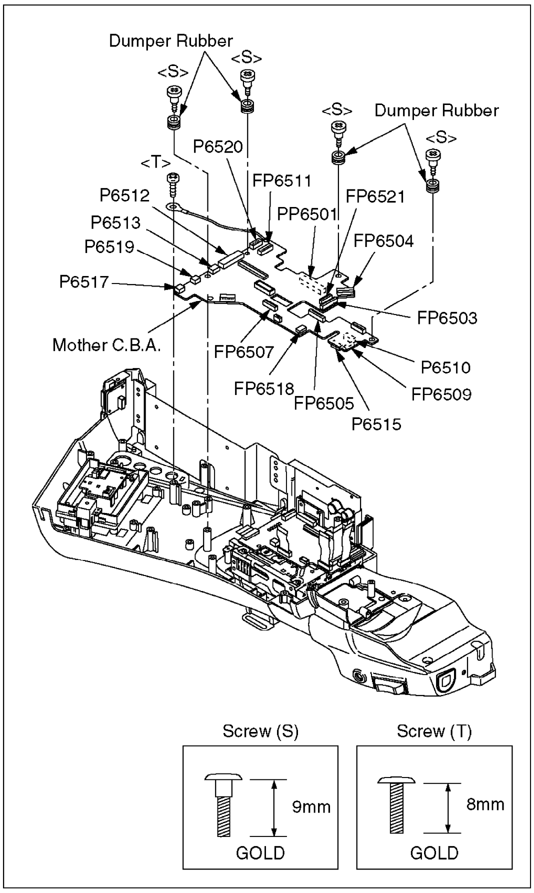

Dumper Rubber
<S>
<S>
<S>
Dumper Rubber
<S>
P6520
<T>
FP6511
FP6521
P6512
PP6501
P6513
FP6504
P6519
P6517
FP6503
Mother C.B.A.
FP6507
P6510
FP6518
FP6509
FP6505
P6515
Screw (S)
9mm
GOLD
Screw (T)
8mm
GOLD

Fig. D12

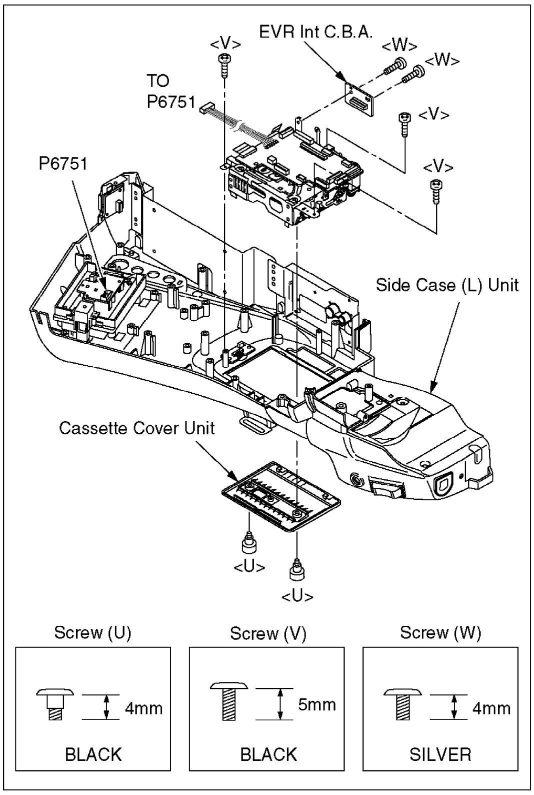

EVR Int C.B.A.
<V>
<W>
<W>
TO
P6751
<V>
<V>
P6751
Side Case (L) Unit
Cassette Cover Unit
<U>
<U>
Screw (U)
4mm
BLACK
Screw (V)
5mm
BLACK
Screw (W)
4mm
SILVER

Fig. D13

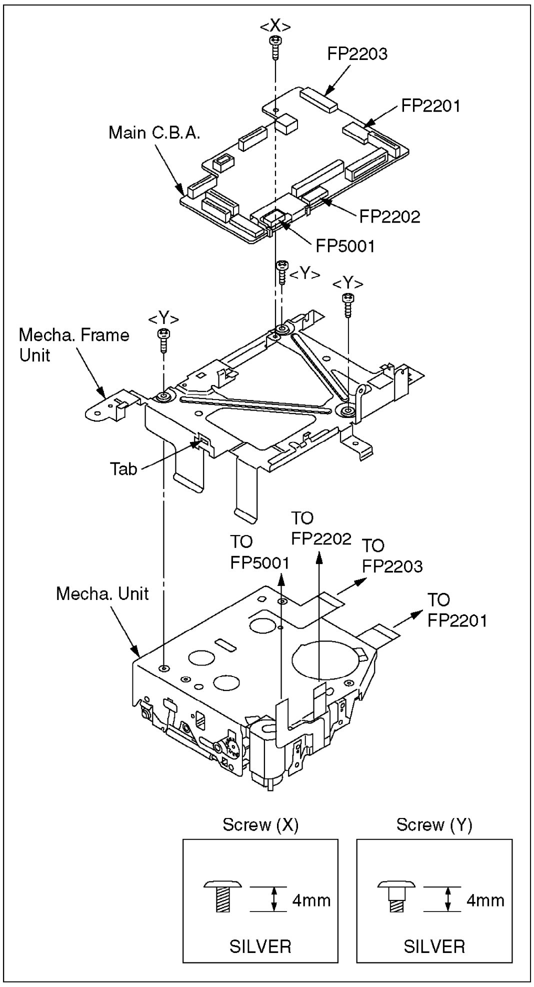

<X>
FP2203
FP2201
Main C.B.A.
FP2202
FP5001
<Y>
<Y>
<Y>
Mecha. Frame Unit
Tab
TO FP2202
TO FP5001
TO FP2203
TO FP2201
Mecha. Unit
Screw (X)
4mm
SILVER
Screw (Y)
4mm
SILVER

Fig. D14

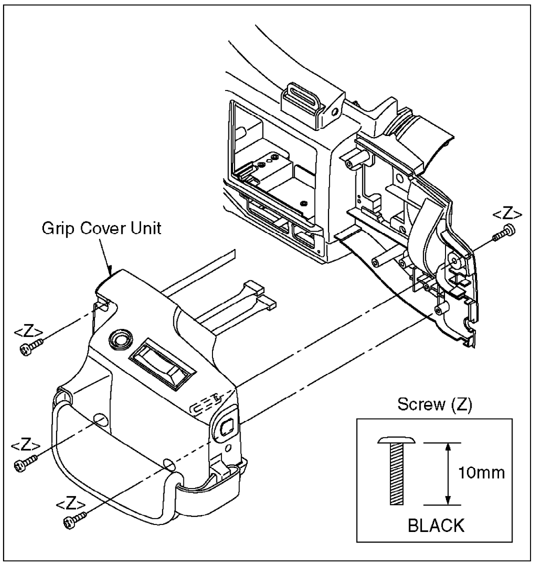
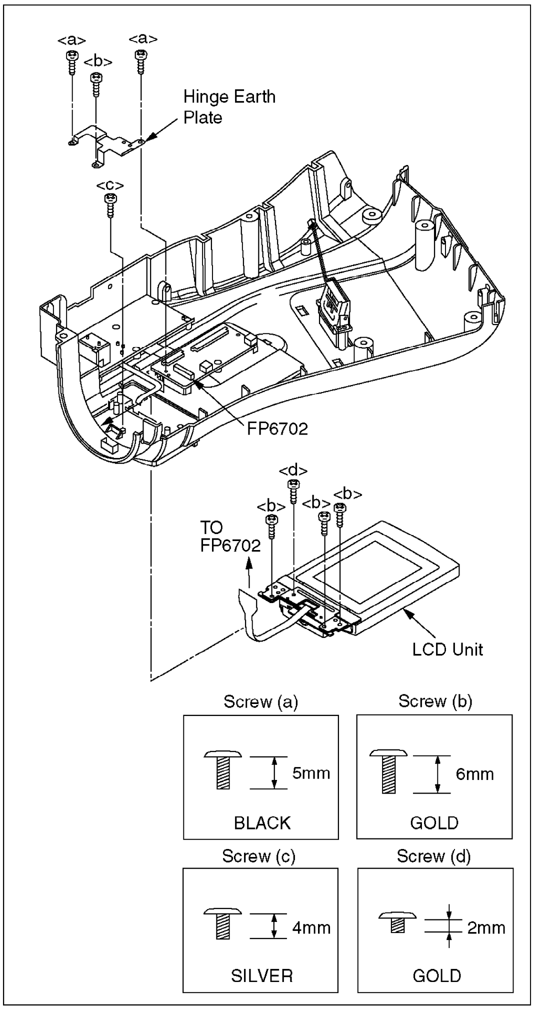

Grip Cover Unit
<Z>
<Z>
<Z>
<Z>
Screw (Z)
10mm
BLACK

Fig. D15


<a>
<a>
<b>
Hinge Earth Plate
<c>
FP6702
<d>
<b>
<b>
<b>
TO FP6702
LCD Unit
Screw (a)
5mm
BLACK
Screw (b)
6mm
GOLD
Screw (c)
4mm
SILVER
Screw (d)
2mm
GOLD

8.3. DISASSEMBLY PROCEDURES OF CAMERA LENS UNIT

The following flowchart describes order or steps for removing the Camera lens unit and certain printed circuit boards in order to make access to the item needing service.

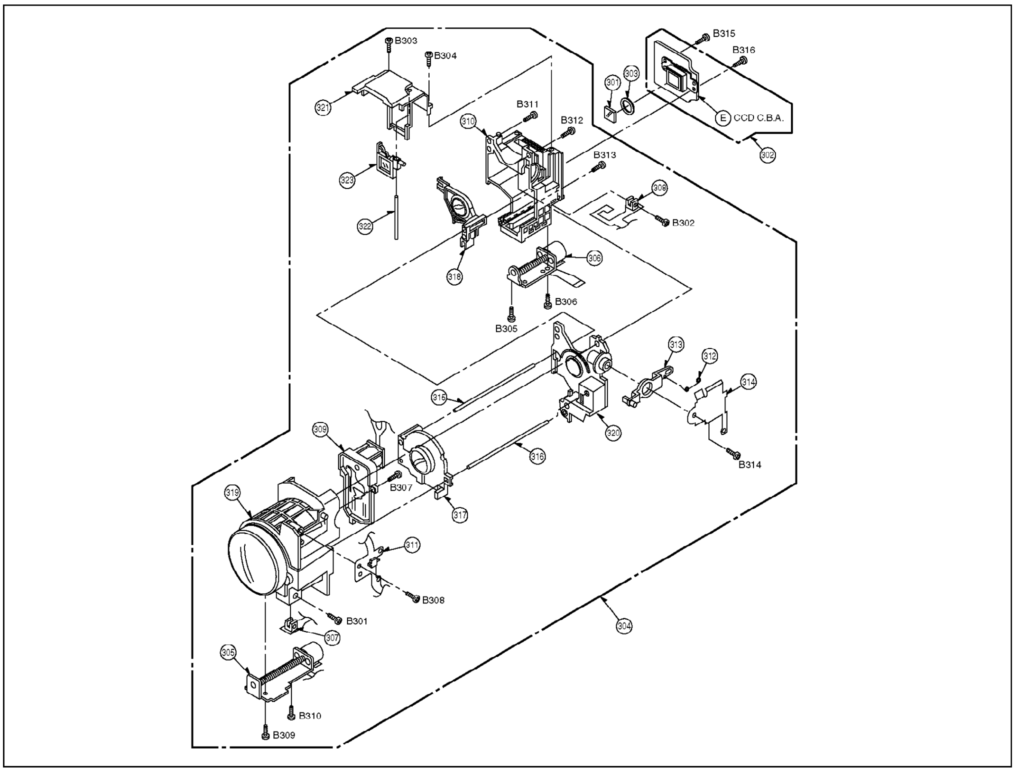
To reassemble the unit follow the steps in reverse order.

Fig. L1

1. CCD Unit	Ref.No.302
2. CCD Cushion & Crystal Filter	Ref.No.303/301
3. Protect Sheet & Lever	Ref.No.314/313
4. F Fixation Frame & F Frame Unit	Ref.No.321/323
5. Zoom Motor Unit	Ref.No.305
6. Focus Motor Unit	Ref.No.306
7. Lens Flex. Unit	Ref.No.311
8. Master Flange & Iris Unit	Ref.No.310/309
9. 3rd Moving Frame Unit	Ref.No.320
10. 4th Moving Frame Unit	Ref.No.318
11. 2nd Moving Frame Unit	Ref.No.317
12. Guide Pole	Ref.No.315/316

Note 1:
Each Ref-numbers are equivalent to number of Fig.L2 and Parts List.

Fig. L2


B303
B304
B315
B316
321
301
303
B311
310
B312
E CCD C.B.A.
302
B313
323
308
B302
322
318
306
B306
B305
313
312
315
314
320
309
316
B314
B307
319
317
311
B308
B301
304
307
305
B310
B309

9. ABBREVIATIONS

10. WAVEFORM TABLE

11. SCHEMATIC DIAGRAMS

11.1. OVERALL SCHEMATIC DIAGRAM

11.2. INTERCONNECTION SCHEMATIC DIAGRAM

11.3. CCD INT FLEX. & CCD SCHEMATIC DIAGRAM

11.4. BATTERY INT SCHEMATIC DIAGRAM

11.5. MF RING UNIT SCHEMATIC DIAGRAM

11.6. PHOTO SHOT SCHEMATIC DIAGRAM

11.7. ZOOM SCHEMATIC DIAGRAM

11.8. HANDLE ZOOM SCHEMATIC DIAGRAM

11.9. DV TERMINAL SCHEMATIC DIAGRAM

11.10. EJECT SCHEMATIC DIAGRAM

11.11. S/S & POWER SCHEMATIC DIAGRAM

11.12. FRONT SCHEMATIC DIAGRAM

11.13. SIDE (R) CASE UNIT SCHEMATIC DIAGRAM

11.14. MIC UNIT SCHEMATIC DIAGRAM

11.15. SIDE (R) SCHEMATIC DIAGRAM

11.16. MIC JACK SCHEMATIC DIAGRAM

11.17. EVR INT SCHEMATIC DIAGRAM

11.18. AV JACK SCHEMATIC DIAGRAM

11.19. MONITOR & HALL SENSOR FLEX. CARD SCHEMATIC DIAGRAM

11.20. EVF INT SCHEMATIC DIAGRAM

11.21. EVF SCHEMATIC DIAGRAM

12. CIRCUIT BOARD ASSEMBLIES

12.1. CCD C.B.A.

12.2. BATTERY INT C.B.A.

12.3. PHOTO SHOT C.B.A.

12.4. ZOOM C.B.A.

12.5. HANDLE ZOOM C.B.A.

12.6. DV TERMINAL C.B.A.

12.7. EJECT C.B.A.

12.8. FRONT C.B.A.

12.9. S/S & POWER C.B.A.

12.10. SIDE (R) C.B.A.

12.11. MIC UNIT

12.12. MIC JACK C.B.A.

12.13. AV JACK C.B.A.

12.14. MONITOR C.B.A.

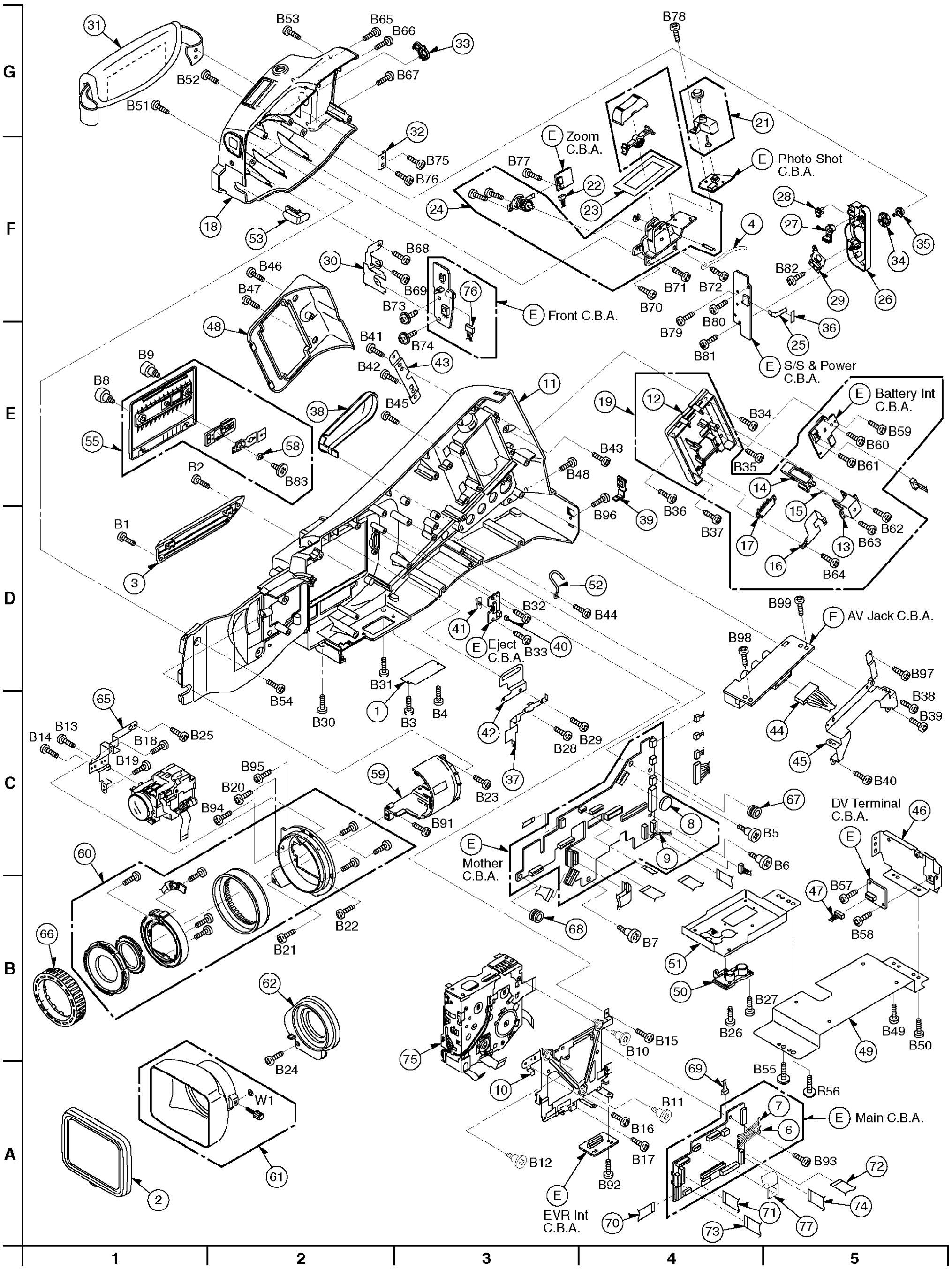
12.15. EVR INT C.B.A.

12.16. EVF INT C.B.A.

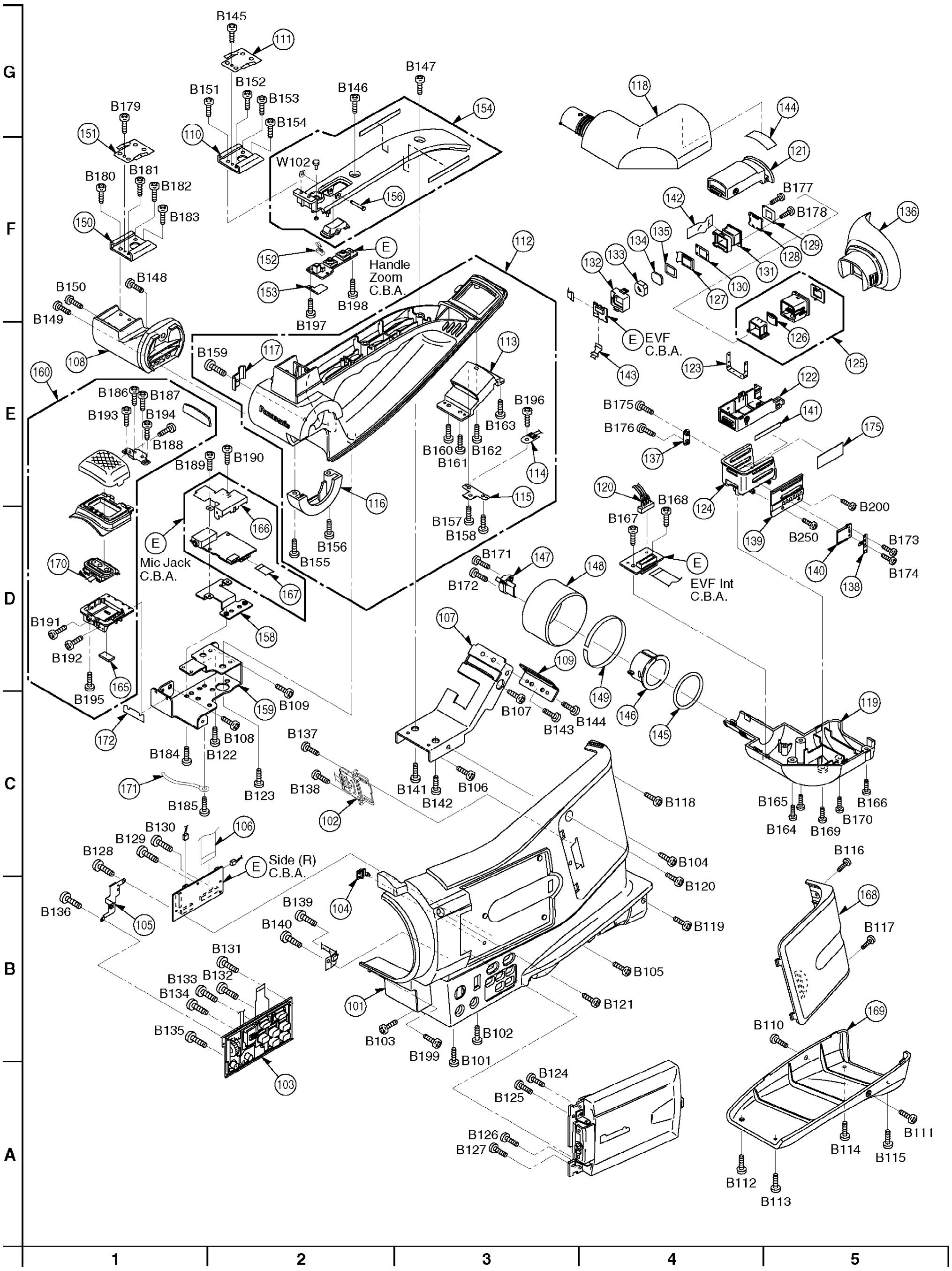
12.17. EVF C.B.A.

13. EXPLODED VIEWS

13.1. FRAME & CASING SECTION (1)

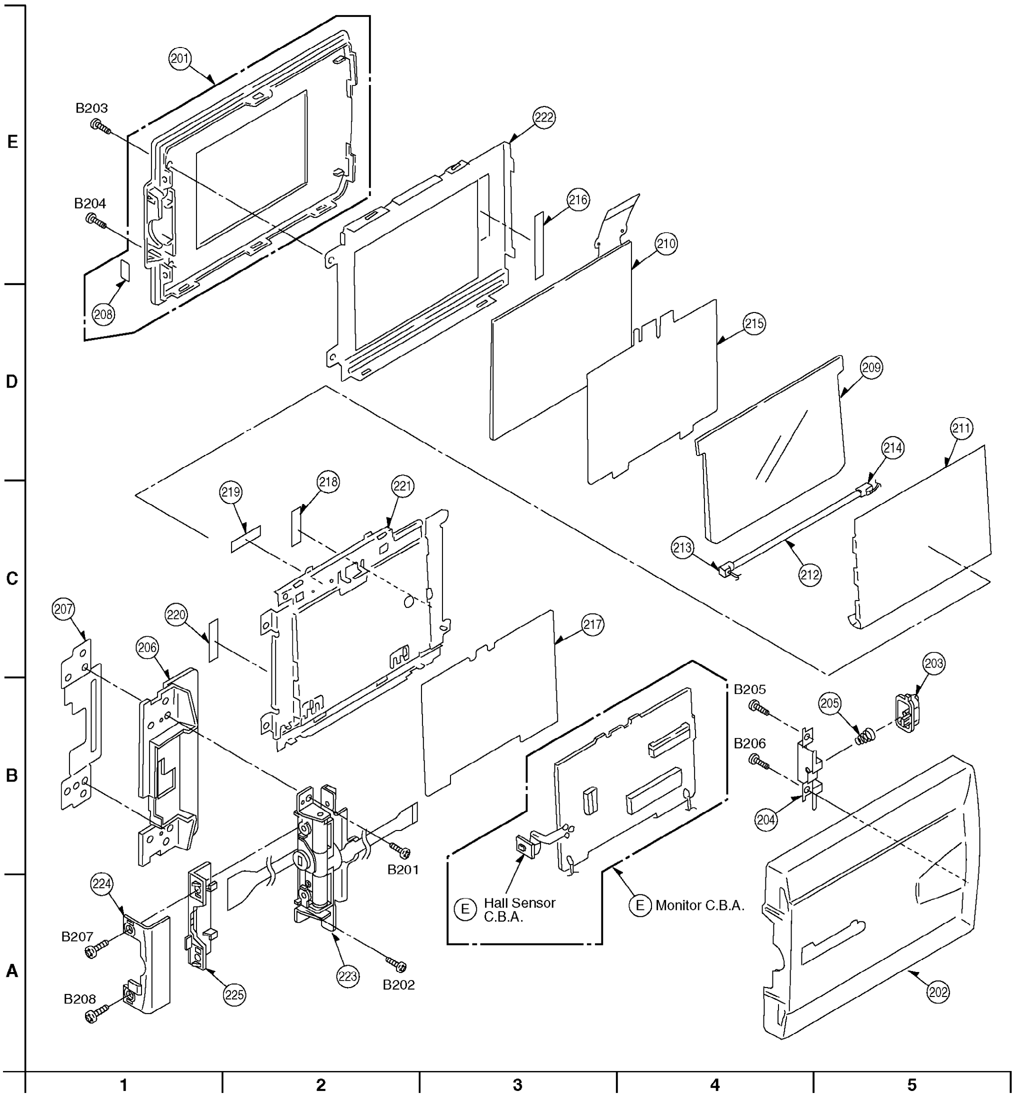

G
F
E
D
C
B
A
1
2
3
4
5
31
B53
B65
B66
33
B52
B67
B51
B78
32
B75
B76
E Zoom C.B.A.
B77
21
E Photo Shot C.B.A.
22
23
24
18
53
28
27
35
4
34
30
B68
B46
B47
B69
76
B73
E Front C.B.A.
B71
B72
B82
29
26
B70
B80
B79
36
25
B81
E S/S & Power C.B.A.
48
B41
B74
B42
43
B9
B8
11
38
B45
19
12
E Battery Int C.B.A.
B34
B59
B60
B61
55
58
B83
B43
B48
B35
14
B2
B96
39
B36
B37
15
17
16
13
B62
B63
B64
B1
3
52
B44
41
B32
E Eject C.B.A.
B33
40
B99
E AV Jack C.B.A.
B98
B97
B38
B39
B54
B30
B31
1
B3
B4
42
B29
B28
44
45
B40
65
B13
B14
B18
B25
B19
B95
B20
B94
59
B23
37
67
DV Terminal C.B.A.
46
B91
8
B5
E Mother C.B.A.
9
B6
E
60
B57
47
B58
68
B7
B22
B21
51
66
50
B27
B26
B49
B50
62
B15
B10
75
B24
69
B55
B56
10
W1
B11
7
E Main C.B.A.
6
B16
B17
B12
B93
72
B92
E EVR Int C.B.A.
70
71
74
73
77
61
2

13.2. FRAME & CASING SECTION (2)



G
F
E
D
C
B
A
1
2
3
4
5
B145
111
B147
B151
B152
B153
B154
B146
154
118
144
121
B179
151
110
W102
B177
B178
136
B180
B181
B182
B183
150
156
142
129
128
131
130
127
135
134
133
132
152
E
Handle
Zoom
C.B.A.
153
B198
B197
112
B150
B148
B149
108
126
125
E
EVF
C.B.A.
143
123
122
B159
117
113
160
B186
B187
B193
B194
B188
B196
B163
B175
B176
141
175
137
B160
B161
B162
114
B189
B190
116
115
120
B168
124
B200
B167
139
B250
B173
B174
140
138
B157
B158
166
E
Mic Jack
C.B.A.
B156
B155
170
167
B171
147
148
E
EVF Int
C.B.A.
B172
107
B191
B192
158
109
149
146
145
119
B195
165
172
159
B109
B107
B143
B144
B108
B122
B184
B137
171
B185
B123
B138
102
B141
B142
B106
B118
B165
B166
B164
B169
B170
B130
106
B129
B128
E
Side (R)
C.B.A.
B104
B120
B116
B136
105
B139
104
B140
168
B119
B117
B131
B133
B132
B134
B105
B135
101
B121
169
B110
103
B103
B199
B102
B101
B124
B125
B126
B127
B111
B114
B115
B112
B113

13.3. LCD SECTION


201
B203
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D
215
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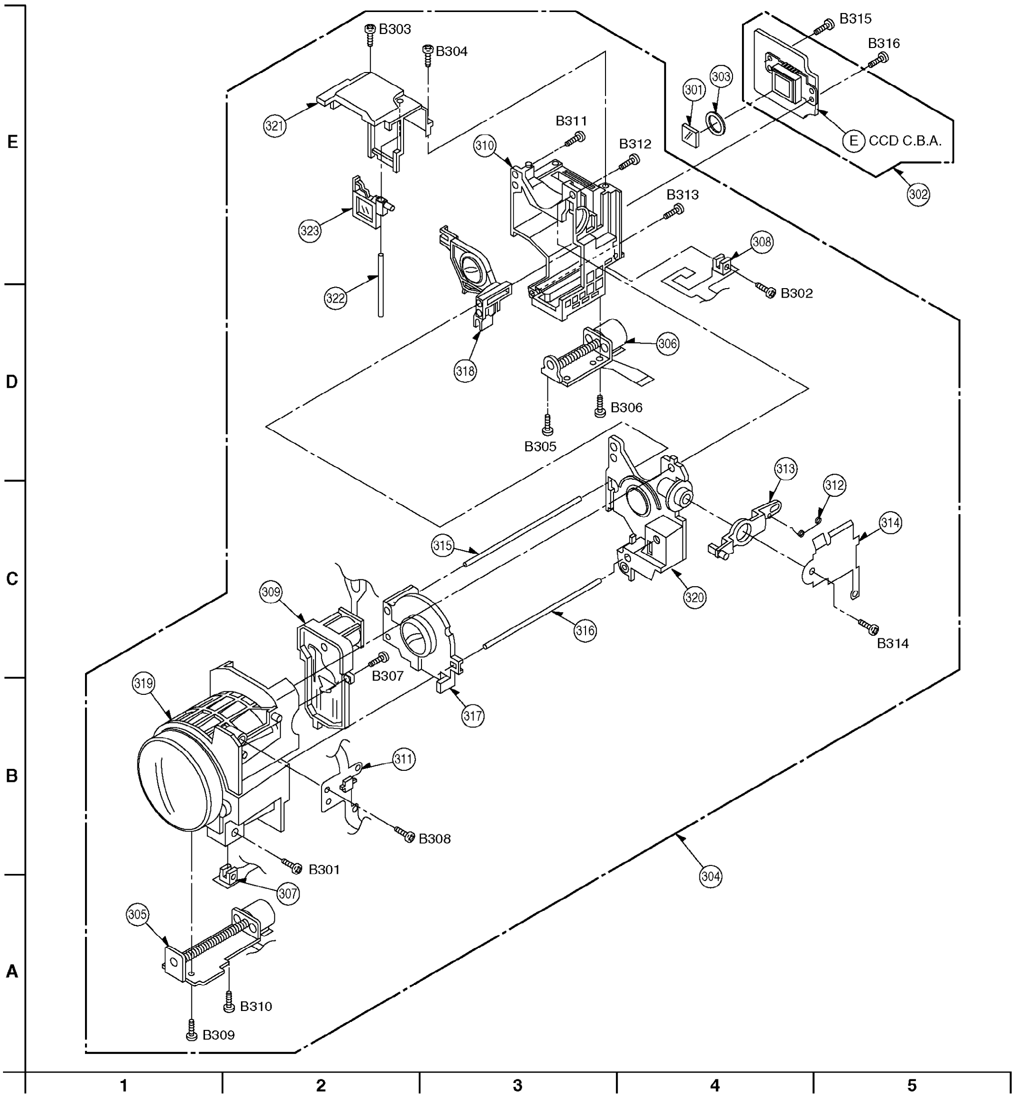
214
211
219
218
221
213
212
C
207
220
217
206
203
B205
205
B206
B
204
B201
224
E Hall Sensor C.B.A.
E Monitor C.B.A.
B207
A
225
223
B202
B208
202
1
2
3
4
5

13.4. CAMERA LENS SECTION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B304
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B312
B313
318
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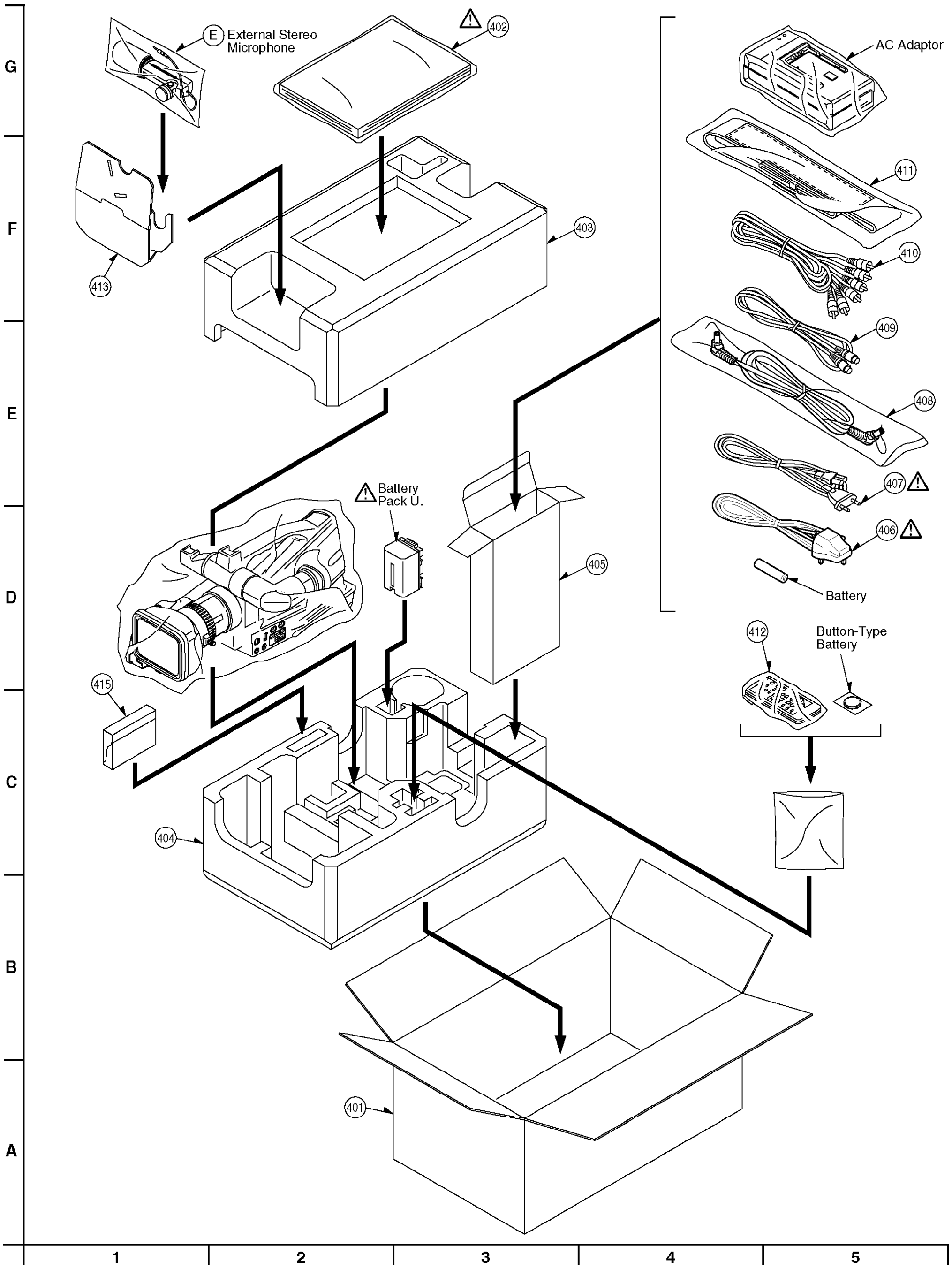
B305
B306
B315
B316
301
303
E CCD C.B.A.
302
308
B302
313
312
314
315
320
B314
309
316
B307
317
319
311
B308
B301
307
304
305
B310
B309
E
D
C
B
A
1
2
3
4
5

13.5. PACKING PARTS & ACCESSORIES SECTION


G
F
E
D
C
B
A
1
2
3
4
5
E External Stereo Microphone
402
AC Adaptor
411
403
413
410
409
408
Battery Pack U.
407
406
405
Battery
412
Button-Type Battery
415
404
401

14. REPLACEMENT PARTS LIST

14.1. FRAME & CASING SECTION (1) PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
1	VGQ5988	EVR COVER	
2	VKF3305	HOOD CAP	
3	VYK0L57	CASSETTE LOWER COVER U.	
4	VJF1443	CLAMPER	
6	VEE0U52	POWER CABLE	
7	VEE0U53	BATTERY CABLE	
8	ML920S/F9D	LITHIUM BATTERY	
9	VEE0W08	GND CABLE	
10	VYQ2552	MECHA. FRAME U.	
11	VYK0L21	SIDE CASE (L) (1) U.	
12	VGQ6912	BATTERY HOLDER	
13	VGQ6037	BATTERY LOCK HOLDER	
14	VGU8749	BATTERY LOCK BUTTON	
15	VMB3314	BATTERY COIL SPRING	
16	VWJ1604	POWER BUS FLEX.	
17	K4ZZ04000032	BATTERY CATCHER	
18	VYK0L24	GRIP COVER (1) U.	
19	VYK0L22	BATTERY CASE U.	
21	VXU1598	PHOTO SHOT BUTTON	
22	VEE0U54	ZOOM/PHOTO CABLE	
23	VMT1197	ZOOM PROTECT SHEET	
24	VYQ2246	ZOOM U.	
25	VWJ08G4130AA	S/S FLEX.	
26	VGQ6071	OPERATION C.B.A. BASE	
27	VGU9247	VTR SELECT BUTTON	
28	VGL0764	VTR SELECT PANEL LIGHT	
29	VMC1271	S/S CLICK SPRING	
30	VMP6760	FRONT CBA FIXATION ANGLE	
31	VFB0212	GRIP BELT U.	
32	VMP6741	BELT FIXATION ANGLE	
33	VGQ4494	S/S LEVER	
34	VGQ4272	S/S BUTTON PIECE	
35	VGU7577	S/S BUTTON	
36	VGQ2759	S/S FLEX. FIXATION TAPE	
37	VSC5420	(L) EARTH PLATE	
38	VJF1477	JACK COVER	
39	VJF1478	DV TERMINAL COVER	
40	VEE0U49	EJECT CABLE	
41	VGU7575	EJECT BUTTON	
42	VMP6652	BELT HOOK ANGLE (FRONT)	
43	VMP6749	BATTERY ANGLE	
44	VEE0U51	AV JACK CABLE	
45	VMP7350	AV JACK ANGLE	
46	VMP7387	DV TERMINAL ANGLE	
47	VEE0U93	DV CABLE	
48	VGQ5990	BATTERY CASE COVER	
49	VMP6737	WEIGHT ANGLE	
50	VMD2796	TRIPOD FRAME	
51	VMP6654	TRIPOD FRAME ANGLE	
52	VJF1443	CLAMPER	
53	VKW2418	REMOTE CONTROLLER WINDOW	
55	VYK0L38	CASSETTE COVER U.	
58	VMB3148	CASSETTE COVER SPRING	
59	VYK0L39	LENS CASE (R) U.	

Ref. No.	Part No.	Part Name & Description	Remarks
60	VXP2213	MF RING U.	
61	VFC3571	LENS HOOD U.	
62	VYQ2555	ND FILTER CASE U.	
65	VMP7349	LENS FRAME	
66	VMG1357	FOCUS RING	
67	VMG1466	DUMPER RUBBER	
68	VMG1466	DUMPER RUBBER	
69	VEE0U50	SPEAKER CABLE	
70	VWJ1468	FRONT FLEX.	
71	VWJ1595	MONITOR FLEX.	
72	VWJ1596	EVF FLEX.	
73	VWJ18G4055AA	OPERATION FLEX. (1)	
74	VWJ20G4050AA	OPERATION FLEX. (2)	
75	VXY1629	MECHA. U.	(RTL)
76	VEE0U55	FRONT CABLE	
77	VEP22336A	CCD INT FLEX CARD C.B.A.	(RTL)
B1	XQN2+BJ5FZ	SCREW	
B2	XQN2+BJ5FZ	SCREW	
B3	XQN16+B4FZ	SCREW	
B4	XQN16+B4FZ	SCREW	
B5	VHD1540	SCREW	
B6	VHD1540	SCREW	
B7	VHD1540	SCREW	
B8	VHD1421	SCREW	
B9	VHD1421	SCREW	
B10	VHD1422	SCREW	
B11	VHD1422	SCREW	
B12	VHD1422	SCREW	
B13	XQN16+BJ4FN	SCREW	
B14	XQN16+BJ4FN	SCREW	
B15	XQN2+BJ5FZ	SCREW	
B16	XQN2+BJ5FZ	SCREW	
B17	XQN2+BJ5FZ	SCREW	
B18	XQN2+BJ5FZ	SCREW	
B19	XQN2+BJ5FZ	SCREW	
B20	XQN2+BJ5FZ	SCREW	
B21	XQN2+BJ5FZ	SCREW	
B22	XQN2+BJ5FZ	SCREW	
B23	XTN26+8GFZ	SCREW	
B24	XTN26+8GFZ	SCREW	
B25	XQN16+B4FZ	SCREW	
B26	XQN16+B5FZ	SCREW	
B27	XQN16+B5FZ	SCREW	
B28	XQN2+CJ6FZ	SCREW	
B29	XQN2+CJ6FZ	SCREW	
B30	XSB2+5FZ	SCREW	
B31	XSB2+5FZ	SCREW	
B32	XTN26+4G	SCREW	
B33	XTN26+4G	SCREW	
B34	XTV26+8G	SCREW	
B35	XTV26+8G	SCREW	
B36	XTV26+8G	SCREW	
B37	XTV26+8G	SCREW	

Ref. No.	Part No.	Part Name & Description	Remarks
B38	XTV26+8G	SCREW	
B39	XTV26+8G	SCREW	
B40	XTV26+8G	SCREW	
B41	XTV3+8G	SCREW	
B42	XTV3+8G	SCREW	
B43	XTV3+8G	SCREW	
B44	XTV3+8G	SCREW	
B45	XSN3+6FZ	SCREW	
B46	XSN3+6FZ	SCREW	
B47	XSN3+6FZ	SCREW	
B48	XTB3+8FFZ	SCREW	
B49	XTB3+8FFZ	SCREW	
B50	XTB3+8FFZ	SCREW	
B51	XTB3+10GFZ	SCREW	
B52	XTB3+10GFZ	SCREW	
B53	XTB3+10GFZ	SCREW	
B54	XTB3+10GFZ	SCREW	
B55	XYN3+F8	SCREW	
B56	XYN3+F8	SCREW	
B57	XQN2+B4	SCREW	
B58	XQN2+B4	SCREW	
B59	XQN2+BJ6	SCREW	
B60	XQN2+BJ6	SCREW	
B61	XQN2+BJ6	SCREW	
B62	XTN26+6G	SCREW	
B63	XTN26+6G	SCREW	
B64	XQN2+BJ25	SCREW	
B65	XQN2+BJ4FZ	SCREW	
B66	XQN2+BJ4FZ	SCREW	
B67	XQN2+BJ4FZ	SCREW	
B68	XTN26+6G	SCREW	
B69	XTN26+6G	SCREW	
B70	XTB3+10GFZ	SCREW	
B71	XTB3+10GFZ	SCREW	
B72	XTB3+10GFZ	SCREW	
B73	XYN3+K6	SCREW	
B74	XYN3+K6	SCREW	
B75	XTB26+6GFZ	SCREW	
B76	XTB26+6GFZ	SCREW	
B77	XQN2+BJ4	SCREW	
B78	XQN2+BJ8	SCREW	
B79	XQN2+BJ4	SCREW	
B80	XQN2+BJ4	SCREW	
B81	XQN2+BJ4	SCREW	
B82	XQN2+BJ4	SCREW	
B83	VHD1105	SCREW	
B91	XTN26+8GFZ	SCREW	
B92	XQN16+B4FN	SCREW	
B93	XQN16+B4FN	SCREW	
B94	XQN2+BJ5FZ	SCREW	
B95	XQN2+BJ5FZ	SCREW	
B96	XQN16+B4FZ	SCREW	
B97	XQN2+BJ4	SCREW	
B98	XTV3+6F	SCREW	

Ref. No.	Part No.	Part Name & Description	Remarks
B99	XTV3+6F	SCREW	
W1	XUC15FP	WASHER	

14.2. FRAME & CASING SECTION (2) PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
101	VYK0L27	SIDE CASE (R) (1) U.	
102	VYK0L28	SPEAKER HOLDER U.	
103	N9ZZ00000177	SIDE (R) CASE U.	
104	VGU8945	RESET BUTTON	
105	VSC5421	HINGE EARTH PLATE	
106	VWJ1602	SIDE (R) FLEX.	
107	VMP6650	HANDLE HOLD ANGLE (REAR)	
108	VGQ6038	MIC HOLDER PLATE	
109	VMP6653	BELT ANGLE (REAR)	
110	VMP2407	SHOE HOLD PLATE	
111	VMC1288	SHOE SPRING	
112	VYK0L34	HANDLE (1) U.	
113	VKF3644	HANDLE COVER	
114	VEK7927	DEW SENSOR U.	EYHS77Y7
115	VMP7404	DEW SENSOR ANGLE	
116	VGQ5995	SLIDE COVER	
117	VJF0804	LENS CABLE CLAMPER	
118	VKM5513	EVF CASE (UPPER)	
119	VKM5514	EVF CASE (LOWER)	
120	VEE0U56	EVF CABLE	
121	VKM5987	EVF HOLDING CASE (UPPER)	
122	VKM5988	EVF HOLDING CASE (LOWER)	
123	VMP5464	EVF CASE ANGLE	
124	VGK2684	EVF HOLDING CASE	
125	VYQ2563	VIEW ADJ. CASE U.	
126	VDL1220	EVF LENS	
127	L5EDDXH00005	EVF LCD PANEL	
128	VGQ5492	EVF PROTECT COVER	
129	VGQ6265	PROTECT COVER SHEET	
130	VGQ6143	LCD MASK	
131	VJF1422	LCD HOLDING PIECE	
132	VJF1423	LCD PRESS SHEET	
133	LSFL0039	LCD LENS	
134	LSFL0040	LCD DIFFUSION SHEET	
135	VGQ6172	EVF TAPE	
136	VMG1464	EYE CAP	
137	VGQ4585	EVF ROTARY HOLDER	
138	VMC1365	EVF ROTARY SPRING	
139	VGQ6068	EVF SLIDE PIECE	
140	VGQ6096	EVF SLIDE PLATE	
141	VMZ3141	EVF SLIDE SPACER	
142	VGQ6328	EVF BARRIER	
143	VWJ1470	EVF FLEX.	

Ref. No.	Part No.	Part Name & Description	Remarks
144	VMZ3140	EVF UPPER SPACER	
145	VMG1372	O-RING	
146	VGQ6999	EVF LOCK RING	
147	VGQ7001	EVF BUSH	
148	VGQ5994	EVF RING	
149	VMT1202	EVF RING TAPE	
150	VMP2407	SHOE HOLD PLATE	
151	VMC1288	SHOE SPRING	
152	VEE0U57	HANDLE ZOOM CABLE	
153	VMZ3182	ZOOM CBA INSULATION SHEET	
154	VYF2870	HANDLE COVER (1) U.	
156	VMS7039	ZOOM SHAFT	
158	VMP6666	MIC JACK CBA HOLD ANGLE	
159	VMP6649	HANDLE HOLD ANGLE (FRONT)	
160	VYK0L54	MIC CASE U.	
165	VGQ6148	CAMERA RADIATION PLATE	
166	VSC4666	MIC JACK SHIELD	
167	VWJ08G4050AA	MIC JACK FLEX.	
168	VGP5435	FACE PANEL	
169	VMG1355	SHOULDER PAD	
170	VWJ06G4065AA	MIC FLEX.	
171	VJF1443	CLAMPER	
172	VGQ7110	MIC SPACER	
175	VGQ7115	EVF SLIDE SPACER (R)	
B101	XSB2+6FZ	SCREW	
B102	XSB2+6FZ	SCREW	
B103	XSB2+6FZ	SCREW	
B104	XTB3+10GFZ	SCREW	
B105	XTB3+10GFZ	SCREW	
B106	XTB3+8GFZ	SCREW	
B107	XTB3+8GFZ	SCREW	
B108	XTB3+8GFZ	SCREW	
B109	XTB3+8GFZ	SCREW	
B110	XTB3+8GFZ	SCREW	
B111	XTB3+8GFZ	SCREW	
B112	XTB3+8GFZ	SCREW	
B113	XTB3+8GFZ	SCREW	
B114	XTB3+8GFZ	SCREW	
B115	XTB3+8GFZ	SCREW	
B116	XTB3+8GFZ	SCREW	
B117	XTB3+8GFZ	SCREW	
B118	XYN3+J10FZ	SCREW	
B119	XYN3+J10FZ	SCREW	
B120	XYN3+J10FZ	SCREW	
B121	XYN3+J10FZ	SCREW	
B122	XTV4+8G	SCREW	
B123	XTV4+8G	SCREW	
B124	XQN2+BJ6	SCREW	
B125	XQN2+BJ6	SCREW	
B126	XQN2+BJ6	SCREW	
B127	XQN2+BJ6	SCREW	
B128	XQN2+BJ5FZ	SCREW	
B129	XQN2+BJ5FZ	SCREW	

Ref. No.	Part No.	Part Name & Description	Remarks
B130	XQN2+BJ5FZ	SCREW	
B131	XQN2+BJ5FZ	SCREW	
B132	XQN2+BJ5FZ	SCREW	
B133	XQN2+BJ5FZ	SCREW	
B134	XQN2+BJ5FZ	SCREW	
B135	XQN2+BJ5FZ	SCREW	
B136	XQN2+BJ5FZ	SCREW	
B137	XQN2+BJ5FZ	SCREW	
B138	XQN2+BJ5FZ	SCREW	
B139	XQN2+B2	SCREW	
B140	XQN2+BJ4FN	SCREW	
B141	XTV4+8G	SCREW	
B142	XTV4+8G	SCREW	
B143	XYN26+K6	SCREW	
B144	XYN26+K6	SCREW	
B145	XQN2+B3FZ	SCREW	
B146	XTB3+10GFZ	SCREW	
B147	XTB3+10GFZ	SCREW	
B148	XTB3+10GFZ	SCREW	
B149	XTB3+10GFZ	SCREW	
B150	XTB3+10GFZ	SCREW	
B151	XQS2+AJ7FZ	SCREW	
B152	XQS2+AJ7FZ	SCREW	
B153	XQS2+AJ7FZ	SCREW	
B154	XQS2+AJ7FZ	SCREW	
B155	XTN3+8B	SCREW	
B156	XTN3+8B	SCREW	
B157	XQN2+BJ35	SCREW	
B158	XQN2+BJ35	SCREW	
B159	XQN2+CJ6FZ	SCREW	
B160	XQN2+CJ6FZ	SCREW	
B161	XQN2+CJ6FZ	SCREW	
B162	XQN2+CJ6FZ	SCREW	
B163	XQN2+CJ6FZ	SCREW	
B164	XTN26+8GFZ	SCREW	
B165	XTN26+8GFZ	SCREW	
B166	XTN26+8GFZ	SCREW	
B167	XTV26+8G	SCREW	
B168	XTV26+8G	SCREW	
B169	XTN3+8B	SCREW	
B170	XTN3+8B	SCREW	
B171	XTN3+10G	SCREW	
B172	XTN3+10G	SCREW	
B173	VHD1127	SCREW	
B174	VHD1127	SCREW	
B175	VHD1127	SCREW	
B176	VHD1127	SCREW	
B177	VHD1303	SCREW	
B178	VHD1303	SCREW	
B179	XQN2+B3FZ	SCREW	
B180	XQS2+AJ7FZ	SCREW	
B181	XQS2+AJ7FZ	SCREW	
B182	XQS2+AJ7FZ	SCREW	
B183	XQS2+AJ7FZ	SCREW	

Ref. No.	Part No.	Part Name & Description	Remarks
B184	XSB26+4FX	SCREW	
B185	XSB26+4FX	SCREW	
B186	XQN2+B4	SCREW	
B187	XQN2+B4	SCREW	
B188	XQN2+B4	SCREW	
B189	XQN2+B4	SCREW	
B190	XQN2+B4	SCREW	
B191	XQN2+B4	SCREW	
B192	XQN2+B4	SCREW	
B193	XQN16+CJ5	SCREW	
B194	XQN16+CJ5	SCREW	
B195	XQN16+CJ5	SCREW	
B196	XQN2+B3FZ	SCREW	
B197	XQN2+BJ8	SCREW	
B198	XQN2+BJ8	SCREW	
B199	XTB3+10GFZ	SCREW	
B200	XQN2+BJ6FZ	SCREW	
B250	XQN2+BJ6FZ	SCREW	
W102	XUC2FP	WASHER	

14.3. LCD SECTION PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
201	VYK0L32	LCD CASE (LOWER) U.	
202	VYK0L31	LCD CASE (UPPER) U.	
203	VGU8841	LCD LOCK BUTTON	
204	VMP6774	LOCK BUTTON FIXATION ANGLE	
205	VMB3505	LCD LOCK SPRING	
206	VGQ6915	LCD HIGE HOLDER	
207	VMP7348	HINGE REINFORCEMENT ANGLE	
208	VGQ6171	SENSOR PROTECT SHEET	
209	VKW2909	LIGHT GUIDEPLATE	
210	EDTCA29QJ0	LCD PANEL U.	
211	VGL0929	REFLECTION SHEET	
212	KC56D1889DH	FLUORESCENCE TUBE	
213	VGQ6138	FLUORESCENCE TUBE RUBBER	
214	VGQ6138	FLUORESCENCE TUBE RUBBER	
215	VGL0927	DIFFUSION	
216	VGQ5810	MF INSULATION SHEET	
217	VGQ6181	LCD INSULATION BARRIER	
218	VGQ6170	LCD PANEL FIXATION TAPE	
219	VGQ6170	LCD PANEL FIXATION TAPE	
220	VGQ6170	LCD PANEL FIXATION TAPE	
221	VSC5206	LCD FRAME	
222	VSC5211	LCD SHIELD CASE	
223	VXD0349	LCD HINGE U.	
224	VGQ6914	HINGE COVER (UPPER)	
225	VGQ6145	HINGE COVER (LOWER)	

Ref. No.	Part No.	Part Name & Description	Remarks
B201	VHD1411	SCREW	
B202	VHD1411	SCREW	
B203	XQN16+BJ6FZ	SCREW	
B204	XQN16+BJ6FZ	SCREW	
B205	XQN16+BJ4	SCREW	
B206	XQN16+BJ4	SCREW	
B207	VHD1209	SCREW	
B208	VHD1209	SCREW	

14.4. CAMERA LENS SECTION PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
301	VDL1193	CRYSTAL FILTER	
302	VEK9865	CCD U.	
303	VMX3070	CCD CUSHION	
304	VXW0570	LENS U.	
305	10S1F10F6NF	ZOOM MOTOR U.	
306	10S1F10F7NF	FOCUS MOTOR U.	
307	CNA1302KR0SL	PHOTOSENSOR	
308	CNA1302KR0SL	PHOTOSENSOR	
309	L9ZZ00000184	IRIS U.	
310	VDW0740	MASTER FLANGE	
311	VEK9866	LENS FLEX. U.	
312	VMB3504	F SPRING	
313	VML3592	LEVER	
314	VMP6769	PROTECT SHEET	
315	VMS6943	GUIDE POLE	
316	VMS6943	GUIDE POLE	
317	VXP2122	2ND MOVING FRAME U.	
318	VXP2124	4TH MOVING FRAME U.	
319	VXQ1010	MAIN FRAME U.	
320	VXQ1011	3RD MOVING FRAME U.	
321	VDW0742	F FIXATION FRAME	
322	VMS6838	F GUIDE POLE	
323	VXQ1012	F FRAME U.	
B301	VHD0852	SCREW	
B302	VHD0852	SCREW	
B303	XQN16+CJ5	SCREW	
B304	XQN16+CJ5	SCREW	
B305	XQN16+CJ5	SCREW	
B306	XQN16+CJ5	SCREW	
B307	XQN16+CJ5	SCREW	
B308	XQN16+CJ5	SCREW	
B309	XQN16+CJ5	SCREW	
B310	XQN16+CJ5	SCREW	
B311	XQN16+CJ8	SCREW	
B312	XQN16+CJ8	SCREW	
B313	XQN16+CJ8	SCREW	
B314	VHD1508	SCREW	

Ref. No.	Part No.	Part Name & Description	Remarks
B315	XQN16+CJ6	SCREW	
B316	XQN16+CJ6	SCREW	

14.5. PACKING PARTS & ACCESSORIES SECTION PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
401	VPG0Q74	PACKING	
402	VQT0A07	OPERATING INSTRUCTIONS	⚠
403	VPN5481	CUSHION (UPPER)	
404	VPN5482	CUSHION (LOWER)	
405	VPK0825	ACCESSORIES PACKING	
406	VJA0940	AC CORD	K2CT3DA00003 ⚠
407	VJA0664	AC CORD	K2CR2DA00004 ⚠
408	VJA1128	DC CABLE	K2GJ2DC00002
409	VJA1120	S-VIDEO CABLE	K2KZ9BA00001
410	VJA0788-D	AV CABLE	K2KA6CA00001
411	VFC3877	SHOULDER BELT	
412	N2QAEC000003	REMOTE CONTROLLER	
413	VPN5880	MIC PAT	
415	VFK1451	HEAD CLEANER	

14.6. ELECTRICAL REPLACEMENT PARTS LIST

Note: 1. Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE: Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.
3. Unless otherwise specified,
All resistors are in OHMS, K=1,000 OHMS. All capacitors are in MICROFARADS (uf), P=uuF.
4. The P.C. Board units marked width "■" show below the main assembled parts.
5. The marking (RTL) indicaters the retention time is limited for this item.
After the discontinuation of this assembly in production, it will no longer be available.

Ref. No.	Part No.	Part Name & Description	Remarks
■	VEP03F85F	MAIN C.B.A.	(RTL)
■	VEP06F10A	MOTHER C.B.A.	(RTL)
■	VEP06F19A	EVR INT C.B.A.	(RTL)
■	VEP22335A	CCD C.B.A.	(RTL)
■	VEP06F12A	BATTERY INT C.B.A.	(RTL)
■	VEP06F17A	ZOOM C.B.A.	(RTL)
■	VEP06F16A	PHOTO SHOT C.B.A.	(RTL)
■	VEP06F13A	FRONT C.B.A.	(RTL)
■	VEP06F14A	S/S & POWER C.B.A.	(RTL)
■	VEP06F15A	EJECT C.B.A.	(RTL)
■	VEP04824A	AV JACK C.B.A.	(RTL)
■	VEP03G26A	DV TERMINAL C.B.A.	(RTL)
■	VEP06F11A	SIDE (R) C.B.A.	(RTL)
■	VEP26254D	MONITOR C.B.A.	(RTL) INCLUDING THE HOLE SENSOR C.B.A.
■	VEP06E18A	HOLE SENSOR FLEX. CARD C.B.A.	(RTL) INCLUDED IN MONITOR C.B.A
■	VEP28298A	EVF INT C.B.A.	(RTL)
■	VEP28284A	EVF C.B.A.	(RTL)
■	VEP06F18A	HANDLE ZOOM C.B.A.	(RTL)
■	VEP04823A	MIC JACK C.B.A.	(RTL)
■	VEP06F19A	EVR INT C.B.A.	(RTL)
PP6851	K1KB60A00105	CONNECTOR 60P	
PP6852	K1KA30A00149	CONNECTOR 30P	
■	VEP22335A	CCD C.B.A.	(RTL)
C294	F1J1C105A091	C.CAPACITOR 16V 1U	
C295	ECJ2VB1E104K	C.CAPACITOR CH 25V 0.1U	
D291	MA143	DIODE	
FP291	VJS3498A014	CONNECTOR (FEMALE) 14P	K1MN14A00034
Q291	2SC3930	CHIP TRANSISTOR	
R292	ERJ6GEYF822	M.RESISTOR CH 1/10W 8.2K	
■	VEP06F12A	BATTERY INT C.B.A.	(RTL)
C6751	F1J0J475A008	C.CAPACITOR 6.3V 4.7U	
C6752	F1J1C105A091	C.CAPACITOR 16V 1U	
FP6751	VJS3319D014	CONNECTOR (FEMALE) 14P	K1MN14B00053
JK6751	K2EC3A000001	DC JACK	
P6751	VJP1232T	CONNECTOR (MALE) 5P	K1KA05A00102

Ref. No.	Part No.	Part Name & Description	Remarks
■	VEP06F17A	ZOOM C.B.A.	(RTL)
FP6661	K1MN03B00002	CONNECTOR 3P	
P6660	VJP3172D003	CONNECTOR (MALE) 3P	K1KA03B00006
■	VEP06F16A	PHOTO SHOT C.B.A.	(RTL)
P6640	K1KA04B00007	CONNECTOR 4P	
S6640	EVQP1D05M	SWITCH	
■	VEP06F13A	FRONT C.B.A.	(RTL)
C6801	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	
C6802	ECST0JY106R	T.CAPACITOR CH 6.3V 10U	
C6803	ECUX0J474KBV	C.CAPACITOR CH 6.3V 0.47U	
C6804	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	
C6806	ECJ1VB1C104K	C.CAPACITOR CH 16V 0.1U	
D6801	LN28CALUS	LED (RED)	
D6802	B3GA00000022	PHOTO DIODE	
D6803	MA132WA	DIODE	MA3S132D
D6804	02DZ6.2YTPH3	DIODE	B0BC6R100014
D6805	02DZ6.2YTPH3	DIODE	B0BC6R100014
IR6801	PNA4618M05VT	IR RECEIVER UNIT	
P6801	VJP3172D005	CONNECTOR (MALE) 5P	K1KA05B00053
Q6801	2SD1030	TRANSISTOR	
Q6802	2SD1819A-R	TRANSISTOR	2SD1819AR
R6801	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	
R6802	ERJ6GEYJ470V	M.RESISTOR CH 1/10W 47	
R6803	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	
R6804	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	
R6805	ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	D0GB334JA002
R6806	ERJ3GEYJ225V	M.RESISTOR CH 1/16W 2.2M	
R6807	ERJ3GEYJ106V	M.RESISTOR CH 1/16W 10M	
■	VEP06F14A	S/S & POWER C.B.A.	(RTL)
D6601	CL150YG-CD	LED	B3AHB0000003
D6602	CL150UR	LED	B3AAB0000050
FP6601	VJS3320B008	CONNECTOR (FEMALE) 8P	K1MN08B00040
R6601	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	
R6602	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	
R6603	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	
R6604	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	

Ref. No.	Part No.	Part Name & Description	Remarks
S6601	ESE103119	SWITCH	
S6602	VMG0763	PHOTO SHOT RUBBER SW	
S6603	EVQPLPA08	SWITCH	
■	VEP06F15A	EJECT C.B.A.	(RTL)
P6620	K1KA02A00385	CONNECTOR 2P	
S6620	ESD165236	SWITCH	
■	VEP04824A	AV JACK C.B.A.	(RTL)
C4501	ECJ1ZB1C104K	C.CAPACITOR CH 16V 0.1U	
C4504	ECJ1ZB1C104K	C.CAPACITOR CH 16V 0.1U	
C4507	ECJ1VB1H472K	C.CAPACITOR CH 50V 4700P	
C4508	ECJ1VB1H472K	C.CAPACITOR CH 50V 4700P	
C4511	ECJ1ZB1C104K	C.CAPACITOR CH 16V 0.1U	
C4512	ECJ1ZB1H103K	C.CAPACITOR CH 35V 0.01U	
C4513	ECJ1ZB1H103K	C.CAPACITOR CH 35V 0.01U	
D4501	02DZ6.2YTPH3	DIODE	B0BC6R100014
D4504	02DZ6.2YTPH3	DIODE	B0BC6R100014
D4511	02DZ6.2YTPH3	DIODE	B0BC6R100014
JK4501	VJJ0695	S JACK	K2HZ106B0005
JK4502	K2HA306B0067	JACK	
JK4511	K2HC103B0143	JACK	
LB4501	VLF1144A102	COIL 1000UH	
LB4502	VLF1144A102	COIL 1000UH	
LB4503	VLF1144A102	COIL 1000UH	
LB4504	J0JBC0000034	FILTER	
LB4505	J0JBC0000034	FILTER	
LB4511	VLF1144A102	COIL 1000UH	
LB4512	VLF1144A102	COIL 1000UH	
LB4513	VLF1144A102	COIL 1000UH	
P4501	K1KA15B00034	CONNECTOR 15P	
R4503	ERJ3GEYJ102A	M.RESISTOR CH 1/16W 1K	
R4504	ERJ3GEYJ102A	M.RESISTOR CH 1/16W 1K	
VZ4501	VRT0158	TRANSIENT/SURGE ABSORBER	D4ED12710002
VZ4502	VRT0158	TRANSIENT/SURGE ABSORBER	D4ED12710002
■	VEP03G26A	DV TERMINAL C.B.A.	(RTL)
JK4591	VJJ0673	DV TERMINAL	K1FA104A0011
P4591	K1KA05A00259	CONNECTOR 5P	
■	VEP06F11A	SIDE (R) C.B.A.	(RTL)

Ref. No.	Part No.	Part Name & Description	Remarks
FP6701	K1MN50B00014	CONNECTOR 50P	
FP6702	K1MN26A00043	CONNECTOR 26P	
FP6703	K1MN21B00033	CONNECTOR 21P	
P6701	K1KA02B00051	CONNECTOR 2P	
P6702	K1KA02B00051	CONNECTOR 2P	
R6701	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
R6702	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
R6705	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
R6906	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	
R6907	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	
R6908	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	
S6701	VSP1102	SWITCH	K0H1BA000260
VZ6707	VRT0158	TRANSIENT/SURGE ABSORBER	D4ED12710002
VZ6708	D4ED1270A008	TRANSIENT/SURGE ABSORBER	
VZ6709	D4ED1270A008	TRANSIENT/SURGE ABSORBER	
■	VEP26254D	MONITOR C.B.A.	(RTL)
C903	ECST0JY106R	T.CAPACITOR CH 6.3V 10U	
C906	ECUX1E471KBQ	C.CAPACITOR CH 25V 470P	
C907	ECJ2YB1A105K	C.CAPACITOR CH 10V 1U	
C908	ECJ2YB1A105K	C.CAPACITOR CH 10V 1U	
C909	ECJ2YB1A105K	C.CAPACITOR CH 10V 1U	
C910	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	
C911	ECUX1E471KBQ	C.CAPACITOR CH 25V 470P	
C913	ECUX1E471KBQ	C.CAPACITOR CH 25V 470P	
C916	ECJ2YB1A105K	C.CAPACITOR CH 10V 1U	
C917	ECJ2YB1A105K	C.CAPACITOR CH 10V 1U	
C918	ECJ2YB1A105K	C.CAPACITOR CH 10V 1U	
C921	ECJ2YB1A105K	C.CAPACITOR CH 10V 1U	
C923	ECUM1C106VB	C.CAPACITOR CH 16V 10U	
C927	ECJ2VB1E104K	C.CAPACITOR CH 25V 0.1U	
C929	ECUX1E152KBQ	C.CAPACITOR CH 25V 1500P	
C931	ECJ2YB1A105K	C.CAPACITOR CH 10V 1U	
C932	ECJ3YB1E105K	C.CAPACITOR CH 25V 1U	
C934	F1J1C105A091	C.CAPACITOR 16V 1U	
C935	ECUM1C106VB	C.CAPACITOR CH 16V 10U	
C937	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	
C938	ECJ0EC1H101J	C.CAPACITOR CH 50V 100P	
C939	ECUX1H331GCV	C.CAPACITOR CH 50V 330P	
C940	ECJ0EC1H560J	C.CAPACITOR CH 50V 56P	
C941	F1G1H100A448	C.CAPACITOR 50V 10P	
C942	ECJ2YB1C474K	C.CAPACITOR CH 16V 0.47U	
C943	ECJ1VB1A224K	C.CAPACITOR CH 10V 0.22U	
C944	ECJ1VB1A224K	C.CAPACITOR CH 10V 0.22U	
C945	ECUX1E332KBQ	C.CAPACITOR CH 25V 3300P	
C946	ECUM1C106VB	C.CAPACITOR CH 16V 10U	
C947	ECJ1ZB1C104K	C.CAPACITOR CH 16V 0.1U	
C948	ECJ1ZB1C104K	C.CAPACITOR CH 16V 0.1U	
C950	F1J1C105A091	C.CAPACITOR 16V 1U	

Ref. No.	Part No.	Part Name & Description	Remarks
C952	**ECJ2VB1E104K**	**C.CAPACITOR CH 25V 0.1U**	
C953	**ECUX1C103KBQ**	**C.CAPACITOR CH 16V 0.01U**	
D903	**MA132WA**	**DIODE**	**MA3S132D**
D904	**MA4X159A0L**	**DIODE**	
D905	**MA6S121**	**DIODE**	**MA6Z121**
D906	**MA2J11100L**	**DIODE**	
D908	**02DZ6.2YTPH3**	**DIODE**	**B0BC6R100014**
FP901	**VJS3320B024**	**CONNECTOR (FEMALE) 24P**	**K1MN24B00036**
FP903	**K1MN25B00033**	**CONNECTOR 25P**	**K1MN25B00034**
IC901	**AN2540FHQ-V**	**IC**	
IC902	**TC4W53FU**	**IC**	**C0JBAR000226**
IC908	**SN74LV04APW**	**IC**	**C0JBAB000247**
IC991	**DN8797MS**	**HOLE IC**	
L901	**VLQ0807K100**	**COIL 10UH**	**G1C100K00024**
L905	**VLQ0807K100**	**COIL 10UH**	**G1C100K00024**
Q901	**HN1C01FUYR**	**TRANSISTOR**	**B1HBCFA00001**
Q902	**B1DFCG000004**	**TRANSISTOR**	
Q903	**B1HFCFA00010**	**TRANSISTOR ARRAY**	
Q905	**B1HFCFA00010**	**TRANSISTOR ARRAY**	
Q906	**2SB1462**	**TRANSISTOR**	**2SB14620R**
QR901	**UNR9210J0L**	**TRANSISTOR-RESISTOR**	
QR902	**UN9214J**	**TRANSISTOR-RESISTOR**	
QR903	**UN9214J**	**TRANSISTOR-RESISTOR**	
QR904	**UNR9210J0L**	**TRANSISTOR-RESISTOR**	
QR905	**UN9212**	**TRANSISTOR-RESISTOR**	**UNR9212**
R901	**ERJ3GEY0R00A**	**M.RESISTOR CH 1/16W 0**	
R903	**ERJ3GEYJ153**	**M.RESISTOR CH 1/16W 15K**	
R904	**ERJ3RBD622**	**M.RESISTOR CH 1/16W 6.2K**	
R907	**ERJ3GEY0R00A**	**M.RESISTOR CH 1/16W 0**	
R908	**ERJ3GEYJ101**	**M.RESISTOR CH 1/16W 100**	**D0GB101JA002**
R909	**ERJ3GEYJ101**	**M.RESISTOR CH 1/16W 100**	**D0GB101JA002**
R910	**ERJ3GEYJ101**	**M.RESISTOR CH 1/16W 100**	**D0GB101JA002**
R912	**ERJ3GEYJ334**	**M.RESISTOR CH 1/16W 330K**	**D0GB334JA002**
R914	**ERJ3GEYJ104**	**M.RESISTOR CH 1/16W 100K**	
R915	**ERJ3RBD333V**	**M.RESISTOR CH 1/16W 33K**	
R917	**ERJ3RBD103**	**M.RESISTOR CH 1/16W 10K**	
R918	**ERJ3GEYJ272**	**M.RESISTOR CH 1/16W 2.7K**	
R919	**ERJ6GEY0R00V**	**M.RESISTOR CH 1/10W 0**	**D0GBR00JA017**
R920	**ERJ3GEY0R00A**	**M.RESISTOR CH 1/16W 0**	
R921	**ERJ3GEYJ153**	**M.RESISTOR CH 1/16W 15K**	
R922	**ERJ3GEYJ333V**	**M.RESISTOR CH 1/16W 33K**	**D0GB333JA002**
R923	**ERJ6GEY0R00V**	**M.RESISTOR CH 1/10W 0**	**D0GBR00JA017**
R924	**ERJ3GEYJ223**	**M.RESISTOR CH 1/16W 22K**	
R925	**ERJ3GEYJ153**	**M.RESISTOR CH 1/16W 15K**	
R926	**ERJ3GEYJ101**	**M.RESISTOR CH 1/16W 100**	**D0GB101JA002**
R927	**ERJ3GEYJ393**	**M.RESISTOR CH 1/16W 39K**	
R928	**ERJ3GEYJ101**	**M.RESISTOR CH 1/16W 100**	**D0GB101JA002**

Ref. No.	Part No.	Part Name & Description	Remarks
R929	ERJ3GEYJ220V	M.RESISTOR CH 1/16W 22	
R930	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R931	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	
R932	ERJ3RBD203V	M.RESISTOR CH 1/16W 20K	
R933	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
R934	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	
R936	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	
R937	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R938	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
R939	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
R940	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R941	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R942	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
R943	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
R945	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
R946	ERJ3GEYJ102A	M.RESISTOR CH 1/16W 1K	
R947	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	D0GB101JA002
R948	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R949	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R950	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
R951	ERJ3GEYJ560V	M.RESISTOR CH 1/16W 56	
R952	ERJ3GEYJ472A	M.RESISTOR CH 1/16W 4.7K	
R953	ERJ3GEYJ823V	M.RESISTOR CH 1/16W 82K	D0GB823JA002
R954	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R956	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	
R957	ERJ3RBD101	M.RESISTOR CH 1/16W 100	ERJ3RBD101V
R958	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	
R959	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	
R960	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	D0GB101JA002
R961	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	
R962	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	
R963	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	
R964	ERJ3GEYJ333V	M.RESISTOR CH 1/16W 33K	D0GB333JA002
R965	ERJ3GEYJ333V	M.RESISTOR CH 1/16W 33K	D0GB333JA002
R966	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	
R967	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	
R968	ERJ3GEYJ333V	M.RESISTOR CH 1/16W 33K	D0GB333JA002
R969	ERJ3GEYJ333V	M.RESISTOR CH 1/16W 33K	D0GB333JA002
R970	ERJ3GEYJ562V	M.RESISTOR CH 1/16W 5.6K	D0GB562JA002
R971	ERJ3GEYJ335V	M.RESISTOR CH 1/16W 3.3M	
R972	ERJ3GEYJ224V	M.RESISTOR CH 1/16W 220K	D0GB224JA002
R973	ERJ8GEYJ335	M.RESISTOR CH 1/8W 3.3M	
R974	ERJ8GEYJ335	M.RESISTOR CH 1/8W 3.3M	
R975	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	
R976	ERJ3RBD681V	M.RESISTOR CH 1/16W 680	
R977	ERJ3RED180	M.RESISTOR CH 1/16W 18	
R978	ERJ6GEYJ335	M.RESISTOR CH 1/10W 3.3M	
R979	ERJ3GEYJ224V	M.RESISTOR CH 1/16W 220K	D0GB224JA002
R980	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	D0GB101JA002
R983	ERJ3GEYJ333V	M.RESISTOR CH 1/16W 33K	D0GB333JA002
R988	ERJ3GEYJ102A	M.RESISTOR CH 1/16W 1K	
R989	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	
T901	ETJ09K59AZ	CHIP TRANSFORMER	

Ref. No.	Part No.	Part Name & Description	Remarks
T902	EFTU21R203	TRANSFORMER	
■	VEP06E18A	HOLE SENSOR FLEX. CARD C.B.A.	(RTL)
IC991	DN8797MS	HOLE IC	
■	VEP28298A	EVF INT C.B.A.	(RTL)
FP852	VJS3320D022	CONNECTOR (FEMALE) 22P	K1MN22B00029
P851	K1KA30A00106	CONNECTOR 30P	
R851	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	D0GBR00JA017
■	VEP28284A	EVF C.B.A.	(RTL)
C802	F1J1C105A091	C.CAPACITOR 16V 1U	
D801	B3AFB0000016	LED (WHITE)	B3AFB0000018
D802	B3AFB0000016	LED (WHITE)	B3AFB0000018
D803	02DZ6.2YTPH3	DIODE	B0BC6R100014
D804	MA3S13300L	DIODE	
FP802	VJS3931B021	CONNECTOR (FEMALE) 21P	
FP803	K1MN22B00062	CONNECTOR 22P	K1MN22B00061
Q801	XP4501	TRANSISTOR-TRANSISTOR	XP04501
R801	ERJ3GEYJ472A	M.RESISTOR CH 1/16W 4.7K	
R803	ERJ3RED470	M.RESISTOR CH 1/16W 47	
R804	ERJ3RED470	M.RESISTOR CH 1/16W 47	
R805	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	
■	VEP06F18A	HANDLE ZOOM C.B.A.	(RTL)
P6681	K1KA07A00067	CONNECTOR 7P	
S6680	K0H1BA000399	SWITCH	
S6681	K0H1BA000105	SWITCH	
S6682	K0H1BA000105	SWITCH	
■	VEP04823A	MIC JACK C.B.A.	(RTL)
C4901	ECJ1VB1H222K	C.CAPACITOR CH 50V 2200P	
C4902	ECJ1VB1H222K	C.CAPACITOR CH 50V 2200P	
C4903	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	
C4905	VCEV0JHY470R	E.CAPACITOR CH 6.3V 47U	F2H0J470A003
C4906	ECJ1VB1E223K	C.CAPACITOR CH 25V 0.022U	
C4907	ECJ1VB1E223K	C.CAPACITOR CH 25V 0.022U	
C4908	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	
C4910	VCEV0JHY470R	E.CAPACITOR CH 6.3V 47U	F2H0J470A003
C4911	VCEV0JHY470R	E.CAPACITOR CH 6.3V 47U	F2H0J470A003
C4912	ECJ1ZB1C104K	C.CAPACITOR CH 16V 0.1U	

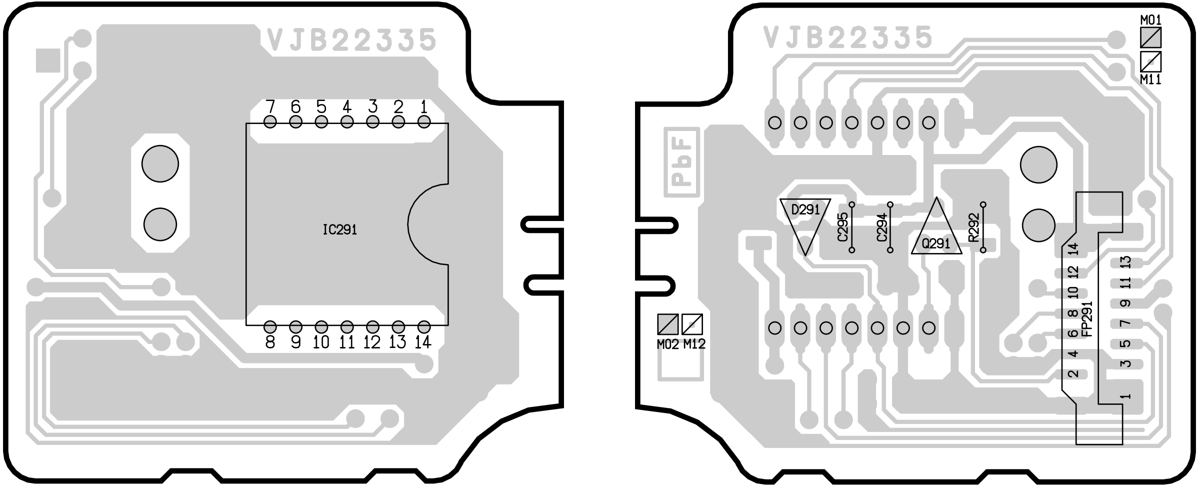
Ref. No.	Part No.	Part Name & Description	Remarks
C4913	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	
C4914	ECJ1VB1H102K	C.CAPACITOR CH 50V 1000P	
C4915	ECJ1VB1H102K	C.CAPACITOR CH 50V 1000P	
FP4902	K1MN06B00048	CONNECTOR 6P	
FP4903	VJS3320B008	CONNECTOR (FEMALE) 8P	K1MN08B00040
JK4901	VJJ0414	MIC JACK	K2HC105E0003
LB4901	J0JHC0000032	FILTER	
Q4901	2SD1819A-R	TRANSISTOR	2SD1819AR
Q4902	2SB1218A-R	TRANSISTOR	2SB1218AR
Q4903	2SD1819A-R	TRANSISTOR	2SD1819AR
Q4904	2SB1218A-R	TRANSISTOR	2SB1218AR
Q4905	2SD1819A-R	TRANSISTOR	2SD1819AR
Q4906	2SD1819A-R	TRANSISTOR	2SD1819AR
Q4907	2SD1819A-R	TRANSISTOR	2SD1819AR
R4901	ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	
R4902	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	
R4903	ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	
R4904	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R4905	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	
R4906	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	
R4907	ERJ6GEYG154	M.RESISTOR CH 1/10W 150K	
R4908	ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	
R4909	ERJ3GEYJ102A	M.RESISTOR CH 1/16W 1K	
R4910	ERJ3GEYJ562V	M.RESISTOR CH 1/16W 5.6K	D0GB562JA002
R4911	ERJ3GEYJ151V	M.RESISTOR CH 1/16W 150	
R4912	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	
R4913	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	
R4914	ERJ6GEYG154	M.RESISTOR CH 1/10W 150K	
R4915	ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	
R4916	ERJ3GEYJ102A	M.RESISTOR CH 1/16W 1K	
R4917	ERJ3GEYJ562V	M.RESISTOR CH 1/16W 5.6K	D0GB562JA002
R4918	ERJ3GEYJ151V	M.RESISTOR CH 1/16W 150	
R4919	ERJ3GEYJ472A	M.RESISTOR CH 1/16W 4.7K	
R4921	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R4923	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R4924	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R4925	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	
R4926	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	
R4927	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	
R4928	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	
R4929	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	
		MISCELLANEOUS	
	VWJ08G4050AA	FLAT CARD CABLE	

15. Schematic Diagram for printing with A4

(VEP22335A)

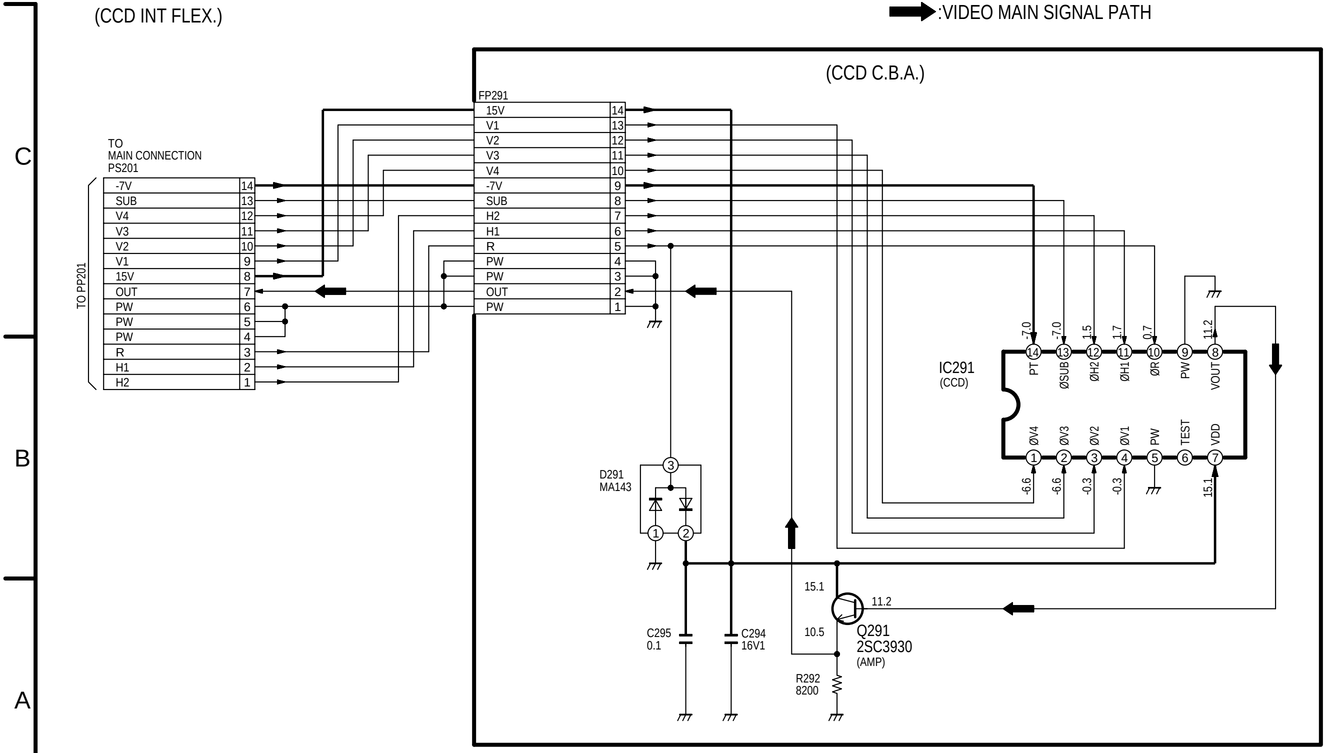
NOTE:MULTILAYER C.B.A.

THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT-PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.


VJB22335
7 6 5 4 3 2 1
IC291
8 9 10 11 12 13 14
VJB22335
PbF
M01
M11
D291
C295
C294
Q291
R292
FP291
14 12 10 8 6 4 2
13 11 9 7 5 3 1
M02 M12
C
B
A
1
2
3
4
5

(COMPONENT SIDE) (FOIL SIDE)

NV-MD9000EN
CCD C.B.A.


(CCD INT FLEX.)
:VIDEO MAIN SIGNAL PATH
(CCD C.B.A.)
TO
MAIN CONNECTION
PS201
TO PP201
-7V 14
SUB 13
V4 12
V3 11
V2 10
V1 9
15V 8
OUT 7
PW 6
PW 5
PW 4
R 3
H1 2
H2 1
FP291
15V 14
V1 13
V2 12
V3 11
V4 10
-7V 9
SUB 8
H2 7
H1 6
R 5
PW 4
PW 3
OUT 2
PW 1
IC291
(CCD)
PT 14 -7.0
ØSUB 13 -7.0
ØH2 12 1.5
ØH1 11 1.7
ØR 10 0.7
PW 9
VOUT 8 11.2
ØV4 1 -6.6
ØV3 2 -6.6
ØV2 3 -0.3
ØV1 4 -0.3
PW 5
TEST 6
VDD 7 15.1
D291
MA143
3
1
2
C295
0.1
C294
16V1
15.1
11.2
10.5
Q291
2SC3930
(AMP)
R292
8200
C
B
A
1
2
3
4
5

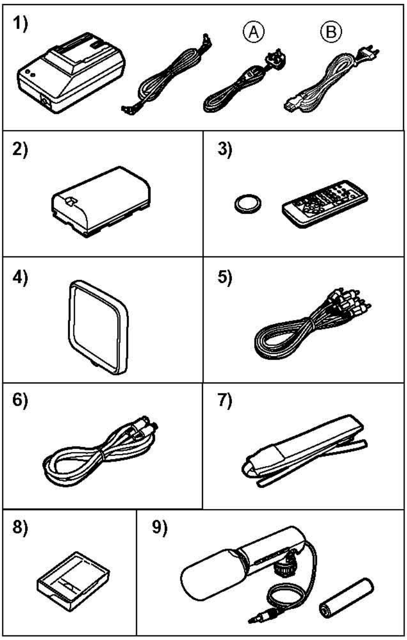
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NV-MD9000EN
CCD INT FLEX.& CCD SCHEMATIC DIAGRAM

Standard Accessories

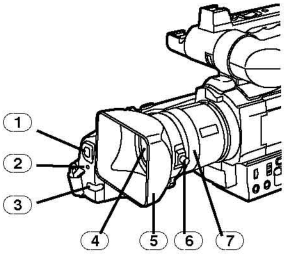
Illustrated are accessories supplied with the Movie Camera.



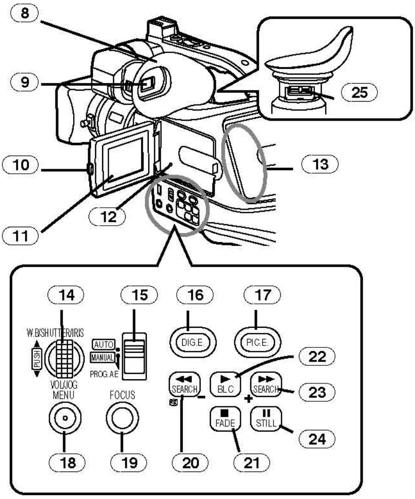
1) **AC Adaptor, DC Input Lead and AC Mains Lead**
   - ●Ⓐ Hong Kong Special Administrative Region of China
   - ●Ⓑ Areas Other than Hong Kong Special Administrative Rigion of China
2) **Battery Pack**
3) **Remote Controller and Button-Type Battery**
4) **Lens Cap**
5) **AV Cable**
6) **S-Video Cable**
7) **Shoulder Strap**
8) **Digital Video Head Cleaner**
9) **External Stereo Microphone and Battery**

Controls and Components

■ Movie Camera



① **White Balance Sensor**
② **Recording Lamp**
③ **Remote Control Sensor**
④ **Lens**
⑤ **Lens Hood**
⑥ **Lens Hood Attachment knob**
⑦ **Focus Ring**


8
9
25
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17
W.B/SHUTTER/IRIS
PUSH
AUTO
MANUAL
PROG.AE
DIG.E.
PIC.E.
22
SEARCH
BLC
SEARCH
23
–
+
VOL/JOG
MENU
FOCUS
FADE
STILL
24
18
19
20
21

⑧ **Eyecup**
⑨ **Viewfinder**

- ●Due to limitations in LCD production technology, there may be some tiny bright or dark spots on the Viewfinder screen. However, this is not a malfunction and does not affect the recorded picture.

---

⑩ **LCD Monitor Open Button [PUSH OPEN]**
⑪ **LCD Monitor**

- ●Due to limitations in LCD production technology, there may be some tiny bright or dark spots on the LCD Monitor screen. However, this is not a malfunction and does not affect the recorded picture.

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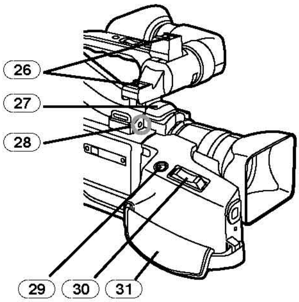
⑫ **Reset Button [RESET]**
⑬ **Speaker**
⑭ **Multi-Function Dial [PUSH]**
⑮ **Mode Selector Switch [AUTO/MANUAL/PROG.AE]**
⑯ **Digital Effect Button [DIG.E.]**

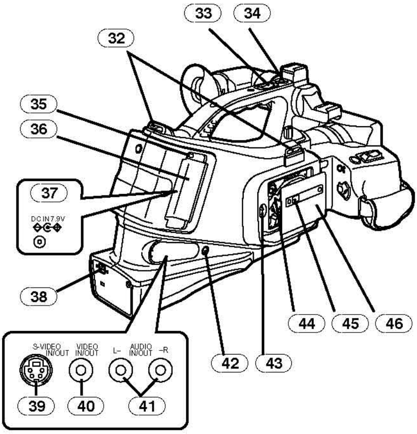
⑰ **Picture Effect Button [PIC.E.]**
⑱ **Menu Button [MENU]**
⑲ **Focus Button [FOCUS]**
⑳ **Rewind/Review Button [◀◀]**
Reverse Search Button [SEARCH−]
Recording Check Button [⊡]
㉑ **Stop Button [■]**
Fade Button [FADE]
㉒ **Play Button [▶]**
Backlight Button [BLC]
㉓ **Fast Forward/Cue Button [▶▶]**
Forward Search Button [SEARCH+]
㉔ **Pause Button [❚❚]**
Still Button [STILL]
㉕ **Eyepiece Corrector Knob**



㉖ **Smart Accessory Shoes**
- The External Stereo Microphone (supplied), etc. can be attached here.

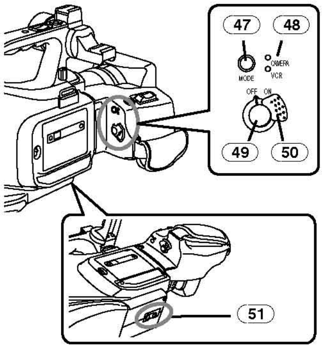
㉗ **Microphone (built-in, stereo)**
㉘ **External Microphone Socket [EXT MIC]**
- Connect with an external microphone or audio equipment. (When this socket is in use, the built-in microphone does not operate.)

㉙ **Photoshot Button [PHOTO SHOT]**
㉚ **Zoom Lever [W/T]**
㉛ **Grip Belt**



㉜ **Shoulder Strap Holders**
㉝ **Sub Zoom Lever [W/T]**
㉞ **Sub Recording Start/Stop Button**
㉟ **Battery Eject Button [PUSH]**
㊱ **Battery Holder**
㊲ **DC Input Socket [DC IN]**
㊳ **DV Terminal [DV]**
- Connect this to the digital video equipment.

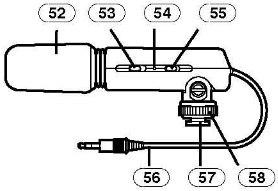
㊴ **S-Video Input/Output Socket [S-VIDEO IN/OUT]**
㊵ **Video Input/Output Socket [VIDEO IN/OUT]**
㊶ **Audio Input/Output Sockets [AUDIO IN/OUT]**
㊷ **Headphone Socket [PHONES]**
㊸ **Cassette Eject Lever [⏏EJECT]**
㊹ **Cassette Holder**
㊺ **Cassette Compartment Lock Button [PUSH LOCK]**
㊻ **Cassette Compartment Cover**



㊼ **Mode Button [MODE]**
㊽ **Operation Mode Lamps [CAMERA/VCR]**
㊾ **Recording Start/Stop Button**
㊿ **Off/On Switch [OFF/ON]**
(51) **Tripod Receptacle**
- Used for mounting the Movie Camera on an optional tripod.

■ External Stereo Microphone

Supplied external stereo microphone can be switced to record sound in either stereo or monaural.



(52) **Wind Shield (Microphone condenser)**
(53) **Off/On Mode Selector Switch [OFF/MONO/STEREO]**
(54) **Battery Check Lamp [BATTERY]**
(55) **[WIND CUT OFF/ON] Switch**
(56) **Stereo Mini-Plug Cord**
(57) **Shoe**
(58) **Shoe Lock**

INITIAL/LOGO		ABBREVIATIONS
A	A GND	Analogue GND
	A HASW	Audio Head Amp Switching Pulse
	A HSW	Audio Switching Pulse
	A MUTE	Audio Mute
	A ORP	Audio Overlap Pulse
	A. TR	Auto Tracking
	A0-8, 0-17	Memory Address
	A3V2	AD Converter Reference Voltage
	AB0-4	Address Bus
	AB0-4, AB12-15	Address Bus Line 0-4, 12-15
	ABSF	Focus Encoder Input
	ACI	Analogue Channel Cording IC
	AD	AD Converter
	AD	Auto Date, Analogue Digital Converter
	AD CLK	AD Clock
	AD REC	Audio Delayed REC
	AD0-6	Address
	AD0-6, ADR0-6	Address Data Line
	ADCLK	Analogue Digital Converter Clock
	ADCNT	Analogue Digital Control
	ADCS	Analogue Digital Chip Select
	A-DET	Audio Detect
	ADREC	Audio Delaied Rec
	ADUB	Audio Dubbing
	AE	Auto Expose
	AECNT	Auto Expose Control
	AEE(H)	Audio E-E (H)
	AEH	Audio Erase Head
	AEIRQ	Auto Expose Interrupt Request
	AF/MF	Auto Focus/Manual Focus
	AF DIS CS	AF DIS Chip Select
	A-FADE(L)	Audio Fade (L)
	AF-AMP	AF HALL Bias
	AFCS	Auto Focus Chip Select
	AFRP	Audio PLL Voltage Control
	AF-VN	Zoom Encoder V-Ref (–)
	AF-VP	Zoom Encoder VREF (+)
	AGC	Automatic Gain Control
	AGCCNT	Automatic Gain Control Control
	AGND	Analogue Ground/Audio Ground
	AGS	Anti Ground Shooting
	AH(P) / (R)	Audio Head (Play) / (Record)
	AHASW	Audio Head Amp Switch Pulse
	AHSW	Audio Head Switch Pulse
	AI, AO	Buffer Input, Output
	AIBCK	Bit Clock (to A/D Converter)
	AIDAT	Serial Data (to A/D Converter)
	AILRCK	L/R Clock (to A/D Converter)
	AIMCK	Master Clock (to A/D Converter)
	ALC CNT	Auto Level Control Control
	ALC MAIN	Auto Level Control Drive
	ALE	Address Latch Enable
	A-LOCK	Full Auto Switch
	A-MUT(H)	Audio Mute (H)
	ANLPTH	Analogue Loop Through High
	AORP	Audio Overlap Pulse
	APCNT	Aperture Control
	APS	Auto Power Save
	ART VH	Artifical Vertical Sync
	AT CNT	Automatic Tracking Gain Adjust
	ATF	Automatic Track Finding
	ATFCLK	41.85MHz Clock
	ATFG	Auto Track Gain
	ATL	Auto Lock Select
	ATN	Absolute Track Number
	ATR OFF(H)	Auto Tracking Off (H)
	ATV	Advanced TV
	AUDIO(N)	Audio (Normal)
	AUX	Auxiliary
	AVDD	Analogue VDD
	AVSS	Analogue Ground
	AWTB	Auto White Balance B-Y
	AWTR	Auto White Balance R-Y
B	BACK	Back-up
	BACK UP	Microcomputer Back-up
	BACK VDD	Back-up Power
	BATT	Battery
	BATT ALARM	Battery Alarm
	BATT REF	Reference Voltage for Battery
	BCB	B Carrier Balance
	BCBM(B-Y)	B-Y Carrier Balance
	BCBM(R-Y)	R-Y Carrier Balance
	BD0-7	REC/Play In/Out Buss
	BDCK	Standard Bus Data Clock (9MHz)
	BDEN	Standard Bus Data Enable
	BEND	Data Block End Request
	BF	Burst Flag Pulse
	BFA	Burst Flag Pulse for Encorder
	BFO/BFI	Burst Flug Input/Output
	BI, BO	Buffer Input, Output
	BL	Back Light
	BL ON	Back Light ON (L)
	BL4V	Back Light 4V
	BLC 0, 1	Back Light Y Control Out, In
	BLDI/O	Back Light Drive Input/Output
	BLK	Blanking Pulse
	BLKA	Blanking for Encorder
	BLKA	Blanking Pulse for Encorder
	BLKI/O	Blanking Pulse In/Out

INITIAL/LOGO		ABBREVIATIONS
	BLKZ	Blanking Pulse for Zoom Encorder
	BM	Balance Modulator
	BQUIET	Bus Out Control Signal
	BUF IN/OUT	Buffer In/Out
	B-Y KB	B-Y Carrier Balance
	B-YO	B-Y Signal Out
C	C A In/Out	Pre-Aperture In/Out
	CAPSTP	Capstan Stop Flag
	C CNT	Colour Control
	C SYNC	Composite Sync Signal
	C/N	Carrier/Noise
	C0-7, C00-07	Chrominance Signal 0-7
	CAGAIN	Aperture Gain Control
	CAM	Camera
	CAM CLK	Camera Clock
	CAM RST	Camera Reset
	CAM SIOC	Camera Serial In/Out Contol
	CAM T	Camera Test
	CAM TL	Capstan Trque Limit
	CAP EC	Capstan Trque Control
	CAP P(H)	Capstan Power On (H)
	CAP R/F/S	Capstan Reverse (H)/Stop (M)/Forward (L)
	CAP SW	Capstan Power Control Switch
	CAPSTP H	Capstan Stop Flag (Stop High)
	CAPVM	Capstan Motor Current
	CAPVS	Capstan Motor Power Control Switch
	CAS	Compresion, Audio Process, Shuffling/Deshuffling
	CAS	Memory Address Strobe (Active Low)
	CASDOWN, DWN	Cassette Down (L)
	CB, CR	Chroma B, Chroma R
	CBLK	Composite Blanking Pulse
	CC	Channel Cording
	CCA	Curent Drive Control
	CCA	Current Control Amp
	CCD	Charge Coupled Devise
	CCW	Counterclockwise
	CD SP0-7	Digital Chroma
	CDS	Correlate Double Sampling Signal
	CDS1, 2	Sampling Pulse for CCD Output Signal
	CE	Chip Enable
	CE	Control Pulse Erase
	CEC	Capstan Error Code
	C-ERA(H)	Control Erase (H)
	CFEM	Chrominance Memory Signal
	CFM	Chrominance Field Memory
	CFM1-4	Chroma Field Memory Signal
	CG CLK	Character Generator Clock
	CG CLK DATA	Clock Generator Data
	CG DATA	Character Generator Data
	CGC	Chrominance Gain Control
	CGCS	Character Generator Chip Select
	CGO	Character Generator Serial Data
	CH	Charge
	CH1	Channel 1 (Odd Field)
	CHR	Character
	CHR BACK	Character Back-up
	CHR MIX	Character Mix
	CI, CO	Buffer In/Out
	CI,CO	Buffer Input & Output
	CIF	Control Signal Forward Input
	CIF, CIR	Positive Control Pulse, Negative Control Pulse
	CIR	Control Signal Reverse Input
	CK	Clock
	CL/CLK	Clock
	CLASS	Classeffication Signal for Compress (DCT/VLC)
	CLASS 0.1	Class Control Signal Durring DCT/VLC
	CLK135	13.5MHz System Clock
	CLK18	18MHz System Clock
	CLK2	Clock 2 (824XFH: 12.875MHz)
	CLK246	24.576MHz Clock
	CLK27	27MHz System Clock
	CLK450	450KHz Clock
	CLKDCLK	Digital Clock
	CLK-PH	Clock Phase Control
	CLK-REF	Reference Clock
	CLP-RST-H	Clamp Reset High Signal
	CLX	TFT X-axis Transmission Clock
	CLX, CLX1-4	Shift Clock for X Direction (LCD Panel)
	CLY	Shift Clock for Y Direction (LCD Panel)
	CLY	TFT Y-axis Transmission Clock
	CLY FG	Cylinder FG Signal
	CMEMO0-3	Chroma Memory Output Signal 0-3
	CMIX	Character Mix
	CMO	Chrominance Memory Output
	COMPC	Position Detection Pulse
	COM RDY	Serial Enable Signal
	CMODE	Camera Mode
	CNCLK	Clock
	CNR	Chrominance Noise Reduction
	CNT, CONT	Control
	CO	Control Out
	CO0-7	Chrominance Output 0 to 7 (Digital)
	COM	Common
	COM RDY	Serial Transmission Enable
	COMB	Comb Filter
	COS EQ	Cosin Equalizer
	CP	Clamp Pulse
	CP ON(H)	Camera Power On(H)
	CP2, 20	Clamp Pulse
	CP2A, CP2O	Encoder Clamp Pulse
	CPN	Component Signal
	CPOB	Clamp Pulse for Optical Blanking
	CPS	Composite Signal
	CPV	Gate Scan Clock
	CR OUT	Pre Apature Out
	CR POW SW	Camera Remote Power On Switch
	CRA	Aperture Gain Control

INITIAL/LOGO		ABBREVIATIONS
	CRA	Pre Apature Gain Control
	CRST	Camera Reset
	CS	Chip Select
	CS 0-7	Chrominance Signal Out 0-7
	CSEL	Clock Phase Select
	CSI 0-7	Chrominance Signal In 0-7
	CTSW	Crosstalk Switch
	CURR	Current
	CW	Clockwise
	CYL EC	Cylinder Motor Trque Control
	CYL PG	Cylinder Motor PG
	CYL VM	Cylinder Motor Current or Power
D	D CLK	Digital Clock
	D MODE	Digital Mode Switch Signal
	D01-03	Zoom 01-03
	DA UV SEL	D/A Convertor U/V Select
	DAC	Digital Analogue Converter
	DAG	Digital Analogue Ground
	DB0-7	Data 0-7
	DB0-7	Microprocessor Data
	DCC	DC Clamp Control
	DCCNT	DC Control
	DCI	Digital Channel Cording IC
	DCLR	Digital Clear
	DCP	Digital Clamp Pulse
	DCS-CLK, DA	CAS & DV I/F Serial Clock
	DC-STP1	DCS Serial Start
	DC-STP2	DCS Serial Stop
	DCT	Discrete Cosine Transform (Compression)
	DCX7	Serial Data
	DEDP 0-3	Playback Data
	DEDR 0-3	Rec Data
	DEMO	Demodulation
	DEMP	A/D Convertor Empahsis Control
	DEMP	De-Emphasis
	DFD 0-7	Encode Data In/Out Between Shaffling Memory
	DFD0-7	Encode Input/Output Signal for Shuffling Memory
	DIBDCK	Bit Clock
	DICLK	Digital Clock
	DIDAT	Serial Data
	DIDAT	Serial Data Durring Digital Audio In
	DIF	Digital Interface
	DILRCK	L/R Clock
	DILRCK	Serial Clock Durring Digital Audio In
	DIMCK	Master Clock
	DIMCK	Mater Clock Durring Digital Audio In
	DIO 1-8	Data In/Out
	DIOS	Data In/Out Select Control Signal
	DIOS	Select Signal for Digital In/Out
	DIS	Digital Image Stabilizer
	DIS R/B	Digital Image Stabilizer Read (H)/Busy (L)
	DIS R/B	DIS IC Rady/Busy
	DIS/KAND	Digital Image Stabilizer/Sensitivity
	DISCS	Dis Chip Select
	DISP	Display
	DL	Delay Line
	DOBCK	Audio A/D Convertor Bit Clock
	DOCTL	Data Output Control Signal
	DODAT	Serial Data (to D/A Converter)
	DOLRCK	Audio A/D Converter LR Clock
	DOLRCK	L/R Clock (to D/A Converter)
	DOMCK	Audio A/D Converter Master Clock
	DOMCK	Master Clock (to D/A Converter)
	DQ 1-16	Memory Data
	DRAM CAS	D-RAM Colum Address Strobe
	DRAM OE	D-RAM Out Enable
	DRAM RAS	D-RAM Read Address Strobe
	DREC	AV Delayed REC Start Pulse
	DRK	Dark (LPF Switch for Auto Focus)
	DS1, 2	Double Sampling Pulse
	DSF 0-7	Data In/Out for Shaffling Memory
	DSF 0-7	Input/Output Data to Shuffling Memory (18MHz)
	DSP	Digital Signal Processor
	DSP R/B	DSP IC Rady/Busy
	DSP-48K-H	DSP IC Clock Select
	DSTB	Data Stobe Signal
	DSV	Digital Sum Variation
	DV	Digital Video
	DVB	Digital Video Broadcast
	DVC	Digital Video Cassette
	DVDD	Digital VDD
	DVIO	Digital Video Input Output
	DVSS	Digital Ground
	DX	Shift Data for X Direction (for LCD)
	DY	Shift Data for Y Direction (for LCD)
	DY	TFT Y-axis Shift Data
	DZ	Digital Zoom
E	E Snap	Electric Snap Shot
	E ZM	Electric Zoom
	E2 CS or E2P CS	EEPROM Chip Select
	E2 R/B	EEPROM Rady/Busy
	E2P	EEPROM
	EARP	Earphone
	EC	Torque Control
	ECC	Error Correction Cording
	ECM	Electric Condencer Mic
	ECR	Reference Voltage for Capstan Torque
	EDA	Error Correction, DCI, ATF Servo
	EE CS	EEPROM Chip Select
	EE R/B	EEPROM Read (H)/Busy (L)
	EEPROM	Electric Erasable Programable Read Only Memory
	EIS	Electric Image Stabilizer (DIS)
	EMP	A/D Convertor Emphasis Control
	ENAB	Enable
	ENV	Enverope
	EOB	End of Block

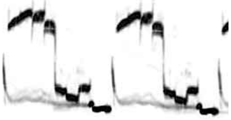
INITIAL/LOGO		ABBREVIATIONS
	EQ	Equalizer
	EVF	Electric View Finder
	EXT DC	External DC (AC Adaptor)
	EXT DC(H)	AC Adaptor DC (H)
	EXT NOREG	AC Adaptor 6V
	EXT S DATA	Serial Data for Edit
	EXT SCK	Serial Clock for Edit
	EZOOM	Electric Zoom
F		
	F ENC	Lens F-Value
	FACT MODE	Factry Mode (not used in the service)
	FB	Feed Back
	FC	Saw Tooth Signal In
	FCK	Clock
	FCO	Saw Tooth Signal Generator
	FENC	Focus Encoder
	FEND	Frame End Pulse
	FH2B	FH/2 (15.625KHz / 2=7.8125KHz)
	FIX OSD	Auto Tracking Off (H)
	FLICK	Flicker Output
	FM	Field Memory
	FM0-7	Field Memory 0-7
	FMCO0-3	Field Memory Chrominance Out 0-4
	FMDIR	Focus Motor Direction
	FMOEM	Field Memory Enable
	FMOEO	Field Memory Enable
	FMT1-4	Focus Motor Terminal 1-4
	FMY00-07	Field Memory Luminance Out 0-7
	FMYI0-07	Field Memory Luminance In 0-7
	FNO	F Value
	FPS	Frame Refference Signal
	FR	Capstan Reverse High
	FRP	Frame Refference Pulse
	FRPSO	Frame Start Pulse
G	G1, G2, G3	Gap 1, 2 and 3
	GCA	Gain Control AMP
	GCNT	Gain Control
	G-CNT	AGC Adjustment
	GCTRL	Gain Control
	GENE	Generator
	GF	FG AMP Terminal
	GSW	Ground for Switching Power
H	H/M/N	Hi-Fi / Mix / Normal
	H/N	Hi-Fi / Normal
	H1, 2	H. CCD Drive Pulse
	HAP	Horizontal Aperture
	HASW	Head AMP Switching Pulse
	HB	Hall Bias
	HBR SET	High Brightness Set
	HBRST	High Brightness Set
	HCLR	High Clear
	HCP	Shift Clock for Horizontal Drive
	HD	Horizontal Drive Pulse
	HDTV	High Definition TV
	HEX	Hexadecimal
	HG	Hall Gain
	HID	Head Switching Pulse
	HLT	High Bright Signal
	HALL IN(+), (–)	Input Signal from Hall IC
	HP	Headphone
	HPF	High Pass Filter
	HSE	Modulated Data Output
	HSP	Timing Pulse for Shaffling Memory
	HSS	Horizontal Sync Signal
	HSW	Head Switching Pulse
	HS-WT	High Speed Zoom
	HSZ	High Speed Zoom
I	I/F	Interface
	I-2 C	Inter Integrated Circuit
	ID(H)	Wide Television (H)
	IMP	Inter Microprocessor Protocol
	INF	CCD Input Signal 1
	INF	Input Frame Signal
	INS	CCD Input SIgnal 2
	INTER	Interval Recording
	INV	Inverter
	IOU	R-Y Analogue Signal Output
	IOV	B-Y Analogue Signal Output
	IOY	Y Analogue Signal Output
	IR	Infrared Rays
	IRDET	Imfrared Ray Detection
	IREF	Current Adjustment Terminal
	IRIS/SH	Iris / Shutter Control
	IRQ	Interrupt Request
	ITI	Insert & Track Information
J	JPEG	Joint Photographic Image Cording Experts Group
K	KANDO	Digital Gain Up
	KB	Carrier Balance
	KEY IN	Key Scan
	KND	Digital Gain Up
	KNEE	Luminance Compensate
L	LCD	Liquid Crystal Display
	LCD P(L)	LCD Power On (L)
	LD	Load Pulse
	LDD	Liquid Direct Drive
	LEDCNT	LED Control
	LI-BATT	Lithium Battery
	LOAD	Loading
	LOAD F, R	Loading Direction (F: Forward / R: Reverse)
	LPF	Low Pass Filter
	LRMONO	Monoral Audio (L + R)
	LSB	Least Significant Bit

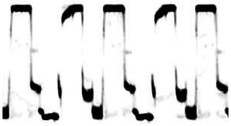
INITIAL/LOGO		ABBREVIATIONS
	LVL	LPF Switch for Auto Focus
M	M1-3	Motor Coil Terminal 1 to 3
	MA0-5	Microprocessor Address Data 0-5
	Mbps	Megahertz Bit Per Second
	MD	Modulation
	MD0-7	Microprocessor Data 0-7
	MDT0-7	Microprocessor Data 0-7
	ME (TAPE)	Metal Evaporated (Tape)
	MENB	Focus Motor Enable
	MFF	Manual Focus Far
	MFN	Manual Focus Near
	MHSYNC	Monitor Horizontal Sync Signal
	MIC	Memory In Cassette
	MIG	Meta In Gap
	MIX N.R.D.	Non Rec Data Mix
	MOD	Modulation
	MOUT	Mic Out
	MP (TAPE)	Metal Particle (Tape)
	MPEG	Moving Picture Image Cording Experts Group
	MPEG2	Moving Picture Image Cording Experts Group Phase 2
	MRST	Focus Motor Reset
	MSB	Most Signal Bit
	MVSYNC	Monitor Vertical Sync Signal
N	N/F	Near/Far Focus
	N/P	NTSC/PAL
	NB1-3	Base for NPN Transistor
	NC	No Connection
	NC1-3	Corrector of NPN Transistor
	NCLR	Power On Reset
	NCP1	Clamp Pulse
	NCP2+VDH	Clamp Pulse + Horizontal Drive Pulse
	NCP2+VDM	Clamp Pulse + Gate Pulse
	NDE	Non Liner De-Emphasis
	NE	Emitor of NPN Transistor
	NLE	Non Liner Emphasis
	NR	Noise Reduction
	NRD	Non Rec Data
	NRD BLK	Non Rec Data Blanking
	NRD CLK	No Rec Data Clock
	NRE	Read Enable Input (Low Active)
	NWE	Write Enable (Low Active)
O	OB	Optical Black
	OBCNT	Optical Black Control
	OBREF	Reference Voltage for Optical Black Control
	OE	Output Enable
	OFH	Horizontal Counted Down Clock Signal (Reference)
	OFS	Offset
	OP	Operation AMP Output
	OSD	ON Screen Display
	OVL	Overlap Pulse
	OZ	Optical Zoom
P	P SW	Power Switch
	PB1-3	PNP Base 1-3
	PBCTL	Play Back Control
	PBCTL	Pre-Branking Control
	PBH	Head Amp Switch
	PBLK	Pre-Blanking (Pulse)
	PC1-3	Corrector of PNP Transistor
	PCBM	Carrier Balance
	PCH	Phase Compensator (Hall AMP)
	PCI	Phase Compensator (Current)
	PCO	Phase Compensator Out
	PCS	Switching Power Control
	PCV	Phase Compensator (Voltage)
	PE	Emitter of PNP Transistor
	PED	Pedestal
	PEDECNT	Pedestal Control
	PENO	Alarm (L)
	PFP	Pilot Frame Position
	PGA, B	Power Ground A, B
	PGC	Pulse Generator Comparator
	PGI	Pulse Generator Input
	PGMM	Pulse Generator Monostable Multivibrator
	PGO	Output of Pulse Generator AMP
	PMODE	Select Signal for Normal / Wide Screen
	PON	Power On
	POR	Power On Reset
	POSCOM	Common Position
	PREAMP	Pre-AMP
	PREBLK	Pre-Blanking
	PT	Protect for V Voltage
	PWM	Pulse Width Modulation
	PWMB	Pulse Width Modulation Pulse
Q	Q2H	Source Output Select
R	R CTL P	Recorded Control Pulse (+)
	R CTL R	Recorded Control Pulse (–)
	R/B	Read/Busy
	R/L	Direction Control for Data Transmition
	RA	Recording AMP
	RA1	Rec AMP 1
	RAC AC	Rec Audio Current
	RAD	Read Address Data
	RAE	Read Address Enable
	RB	Read Busy
	R-B	R Bias
	RCB	R Carrier Balance
	RE	Read Enable
	RE(F), (S)	Rotary Erase Head Transformer
	REB	R Bias
	REC CC	Rec Current Control
	REC CCNT	Rec Current Control
	RECCTRL	Recording Control Pulse
	RECI	Rec Amp Switch

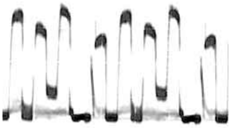
INITIAL/LOGO		ABBREVIATIONS
	RENCF	Lens Control (Forward)
	RENCR	Lens Control (Reverse)
	RERASE	Rotary Erase Head
	RGBIV1-2	1V Inverted Signal 1-2
	RGO R/G OFF	Offset Voltage for AWT R
	RSF	Capstan Direction (Reverse / Stop / Forward)
	RST	Reset
	RSTB	R Strobe
	RSTPWD	Reset Power Down Input
	RSTR	Reset Read
	RSTW	Reset Write
	RT	Saw Tooth Terminal
	RVCO	Resister for Oscillation
	RW	Read Write
	RWAE	Read Write Enable
S	S PHOT	Supply Photo Transistor
	S/H	Sampling Hold
	S/S	Start/Stop
	SBD	Serial Data
	SBI	Serial Data Input
	SBO	Serial Data Output
	SBT	Serial Clock
	SCAN0-5	Key Scan 0-5
	SCK	Serial Clock
	SCR	Search
	SCR, S.C.R.	Still Cue Review
	SEG.	Segment
	SET	White Balance Set
	SH/IRIS	Shutter/Iris Control
	SHIFT	Capasitor for Phase Shift
	SI	Serial Data Input
	SIC	Shift In Clock Input
	SIOC	Serial In/Out Control
	SMCE	Shaffling Memory Chip Enable
	SMRS	Shaffling Memory Read Strobe
	SMWE	Shaffling Memory Write Enable
	SMWS	Shaffling Memory Read Strobe
	SNAP	Snap Shot
	SNS LED	Sensor LED
	SO	Serial Data Output
	SPA	ATF Smapling Pulse
	SPEN	8 Bit Shift Register Enable
	SPK	Speaker
	SPO	Reset for Switcing Power
	SPST	8 Bit Shift Register Strobe
	SREELP	Supply Reel Pulse
	SRT	Start
	SSA	Start Sync block Area
	SSW	Select Signal for Low Pass Filter
	ST5V	Safety Tab 5V
	STAB	Safety Tab Switch
	STB	Stand by Signal
	STB	Strobe
	SWB	Switching Pre-Drive Pulse
	SYL EC	Cylinder Torque Control
	SYL FG	Cylinder FG
T	T PHOT	Take-up Photo Transistor
	TBC	Time Base Conntrol
	TFT	Thim Film Transistor
	TH	Thermostat for Battery
	TI	Test Mode Select
	TL	Torque Limit
	TM	Sub Code
	TMD	Sub Code Data
	TRE	Tracking Error Signal
	TREEL(P)	Take-up Reel (Pulse)
	TRFIX	Tracking Fix
	TRIWAVE	Tracking Wave
	TRP	Tracking Position
	TRP	Trap
	TSR	Head Switching Refference
	TST	Time Scale Transfer
U	U/V SEL	R-Y/B-Y Select Signal
	UNLOAD	Un-Loading
	UNRE	Microprocessor Read Enable
	UNWE	Microprocessor Write Enable
	UV	R-Y/B-Y
	UV SEL	R-Y/B-Y Select Signal
V	V1-V4	V. CCD Drive Pulse
	VB	VH Filter Switching
	VCE	Power Terminal
	VCNTL	Video Control
	VCO	Voltage Control Oscillator
	VCP	Shift Clock Output for Vertical Drive
	VCTLD	Video Control
	VCTRL	Voltage Charge Control
	VD	Vertical Drive Pulse
	VDDX	X Drive Power for Colour LCD
	VDDXY	XY Drive Power for Colour LCD
	VDDY	Y Drive Power for Colour LCD
	VDREC	Video Delayed Rec
	Vgg	Voltage for Gate IC
	Vgl	Gate off Voltage
	VID	Video Signal Out
	VIN	Video In
	VITC	Vertical Interval Time Code
	VITERBI	One of Signal Detection Method
	VL	Low Voltage
	VLC	Variable Length Cording
	VLOCKP	Artificial Sync Pulse
	VLP	Artificial Sync Pulse
	VM	Motor Voltage
	VMD	Velocity Mode Data
	VMD1-3	Electric Shutter Mode

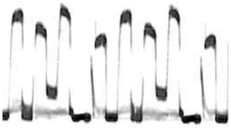
INITIAL/LOGO		ABBREVIATIONS
	VMODE	NTSC/PAL Select Switch
	VMVH	VH Filter Switching
	VORP	Video Overlap
	VRB	Voltage Refference Bottom
	VRBS	Voltage Refference Bottom Output
	VREF1R3V	Refference Voltage 1.3V
	VREF3R3V	Refference Voltage 3.3V
	VREFH	Refference Voltage High Side
	VREFL	Refference Voltage Low Side
	VRI	Refference Voltage Input
	VRO	Refference Voltage Output
	VRT	Voltage Refference Top
	VRTS	Voltage Refference Top Output
	VS	Switching Comparator
	VSS	Vertical Sync Signal
	VSSX	X Driver Power for Colour LCD
	VSSXY	X-Y Driver Power for Colour LCD
W	W/N	Mode Select for Window Mode
	W/N	Wide / Normal
	WAD	Write Address Enable
	WAE	Write Address Enable
	WAERAE	Write Address Enable
	WARI	Interrupt
	WB	White Balance
	WE	Write Enable
	WEM	Memory Write Enable
	WHD	Wide Horizontal Drive Pulse
	WIDE A	Wide Zoom
	WSB	B AGC Control
	WSR	R AGC Control
	WTV	Wide TV
X	XP	FG Logic Reset
Y	Y FM0-7	Y Field Memory 0-7
	YCE	Cylinder Error Code
	YGC	Y Gain Control
	YMO 0-7	Y Field Memory 0-7
	YNCST	Noize Canceller
	YNR	Luminance Noise Reduction
	YSDP 0-7	Digital Y Out 0-7
Z	Z.ENC	Zoom Encoder
	Z.MIC	Zoom Mic
	ZENC	Zoom Encoder Output
	ZMDIR	Zoom Drive
	ZMEN	Zoom Enable
	ZMT	Zoom Motor Tele Side
	ZMT (+)/(–)	Zoom Motor (+)/(–)
	ZMTER	Zoom Motor Tele Side
	ZMW	Zoom Motor Wide Side
	ZSW	Zoom Switch

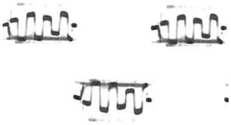
INITIAL/LOGO		ABBREVIATIONS

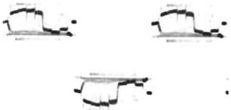

P851-11 REC/PLAY
0.7Vp-p (20usec.div.)

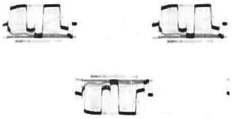

P851-12 REC/PLAY
0.7Vp-p (20usec.div.)

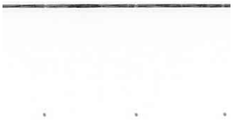

P851-13 REC/PLAY
0.7Vp-p (20usec.div.)

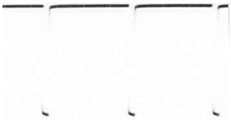

IC901-1 REC/PLAY
0.8Vp-p (20usec.div.)

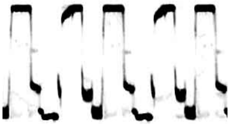

IC901-4 REC/PLAY
4.2Vp-p (20usec.div.)

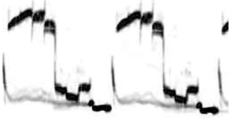

IC901-6 REC/PLAY
4.0Vp-p (20usec.div.)

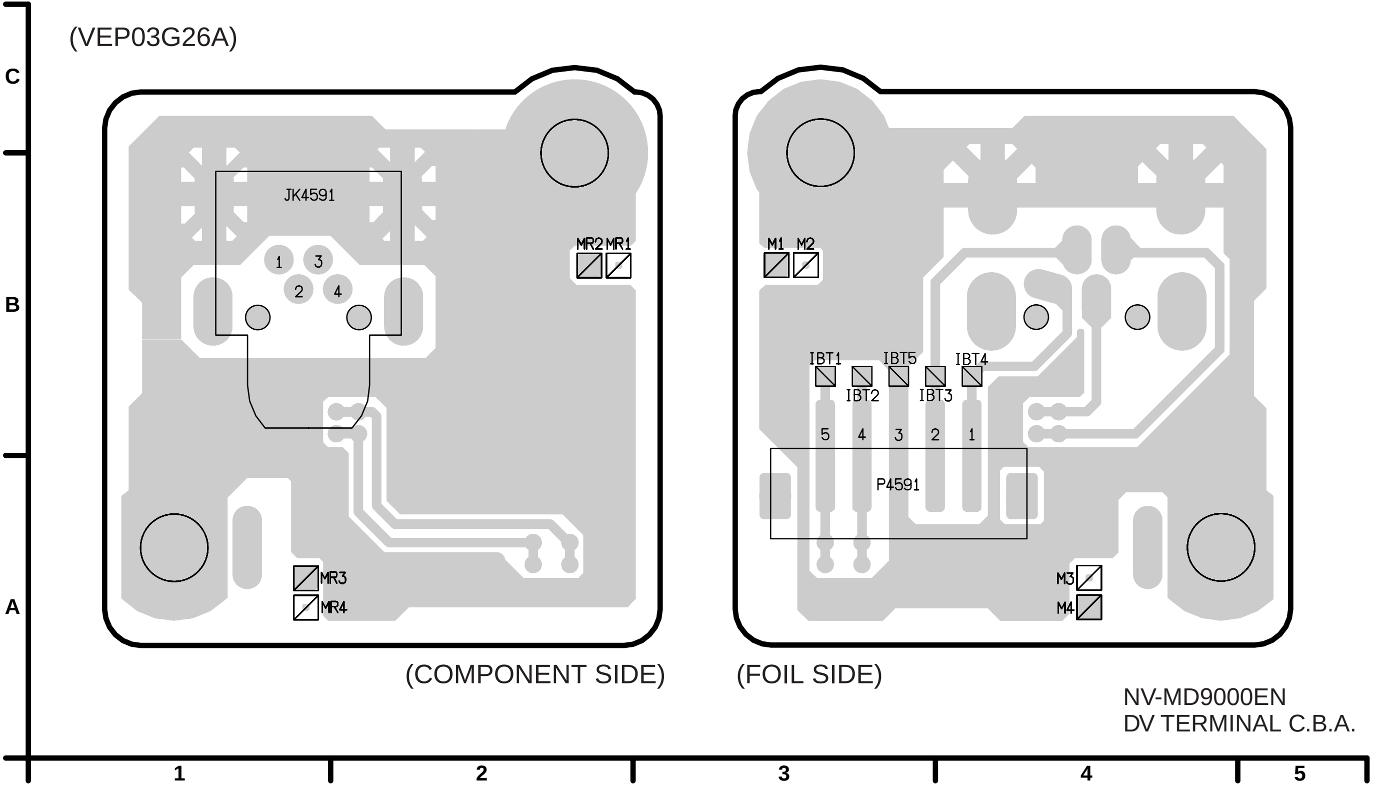

IC901-9 REC/PLAY
4.2Vp-p (20usec.div.)


IC901-45 REC/PLAY
2.4Vp-p (20usec.div.)


IC901-46 REC/PLAY
2.4Vp-p (20usec.div.)

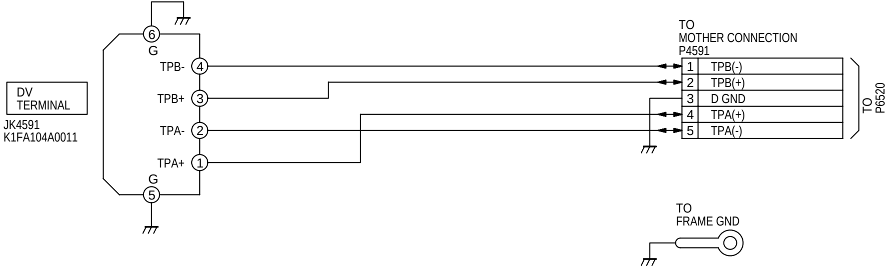

IC901-47 REC/PLAY
0.7Vp-p (20usec./div.)


IC901-48 REC/PLAY
0.7Vp-p (20usec./div.)


(VEP03G26A)
C
B
A
1
2
3
4
5
JK4591
1
3
2
4
MR2
MR1
MR3
MR4
M1
M2
IBT1
IBT5
IBT4
IBT2
IBT3
5
4
3
2
1
P4591
M3
M4
(COMPONENT SIDE)
(FOIL SIDE)

NV-MD9000EN
DV TERMINAL C.B.A.

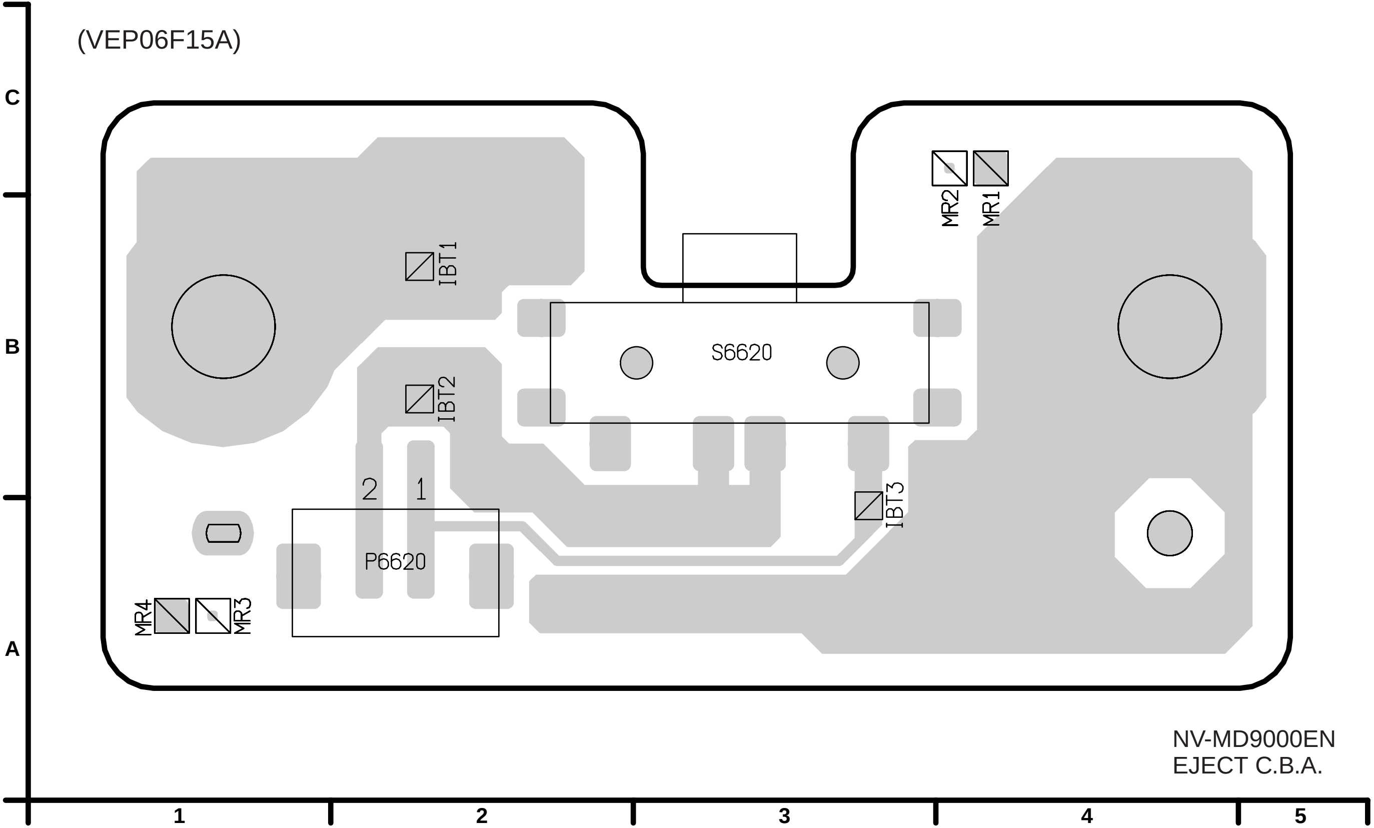
(DV TERMINAL C.B.A.)



6
G
TPB-
4
TPB+
3
TPA-
2
TPA+
1
G
5
DV
TERMINAL
JK4591
K1FA104A0011
TO
MOTHER CONNECTION
P4591
1
TPB(-)
2
TPB(+)
3
D GND
4
TPA(+)
5
TPA(-)
TO
P6520
TO
FRAME GND
B
A
1
2
3
4

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC
DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE
REFER TO PARTS LIST.

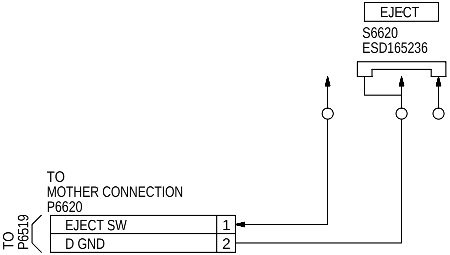
NV-MD9000EN
DV TERMINAL SCHEMATIC DIAGRAM


(VEP06F15A)
C
B
A
1
2
3
4
5
IBT1
IBT2
IBT3
MR1
MR2
MR3
MR4
S6620
P6620
2
1

NV-MD9000EN
EJECT C.B.A.

(EJECT C.B.A.)

B


EJECT
S6620
ESD165236
TO
MOTHER CONNECTION
P6620
TO
P6519
EJECT SW
1
D GND
2

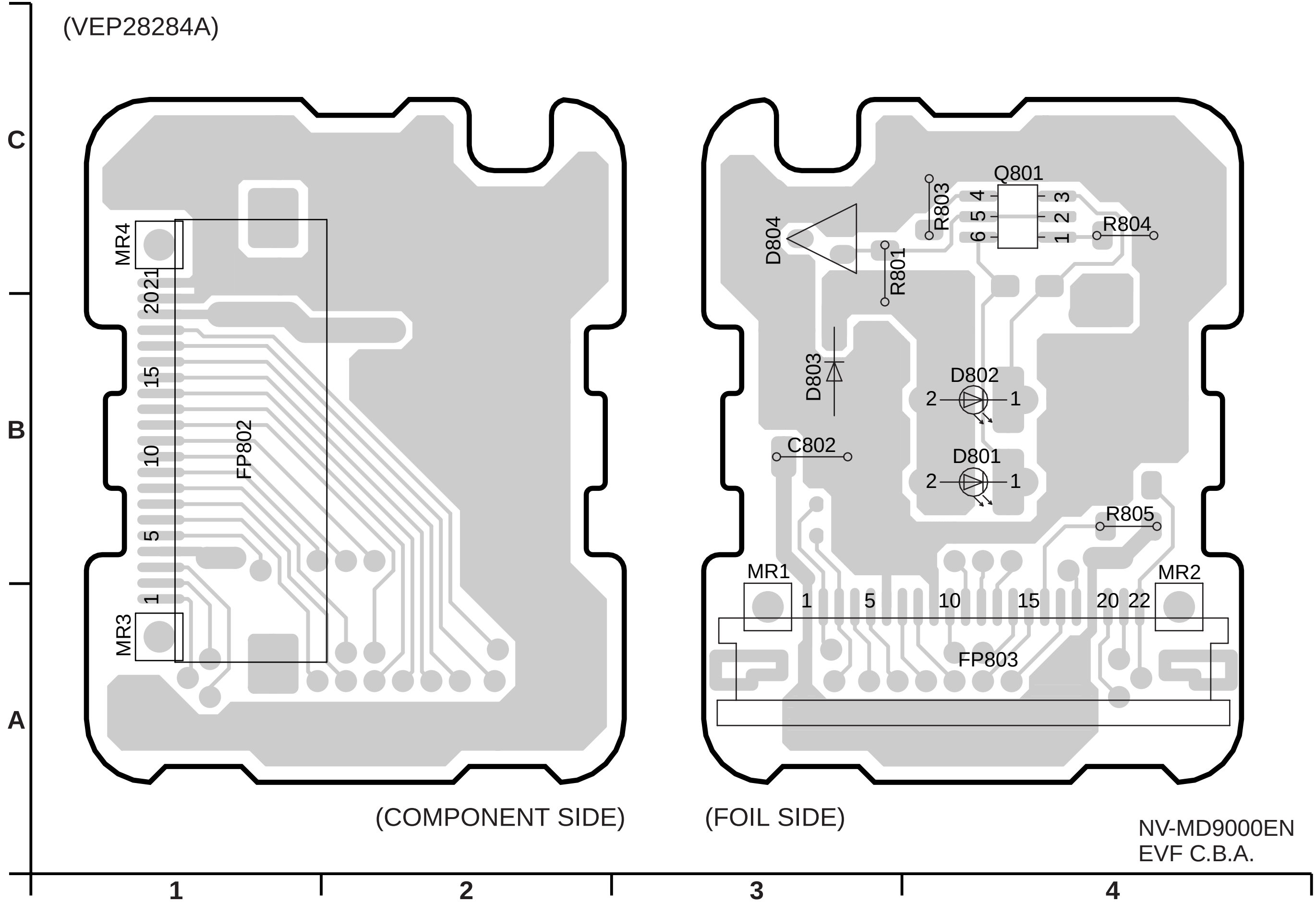
A

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-MD9000EN
EJECT SCHEMATIC DIAGRAM

1 2 3

(VEP28284A)

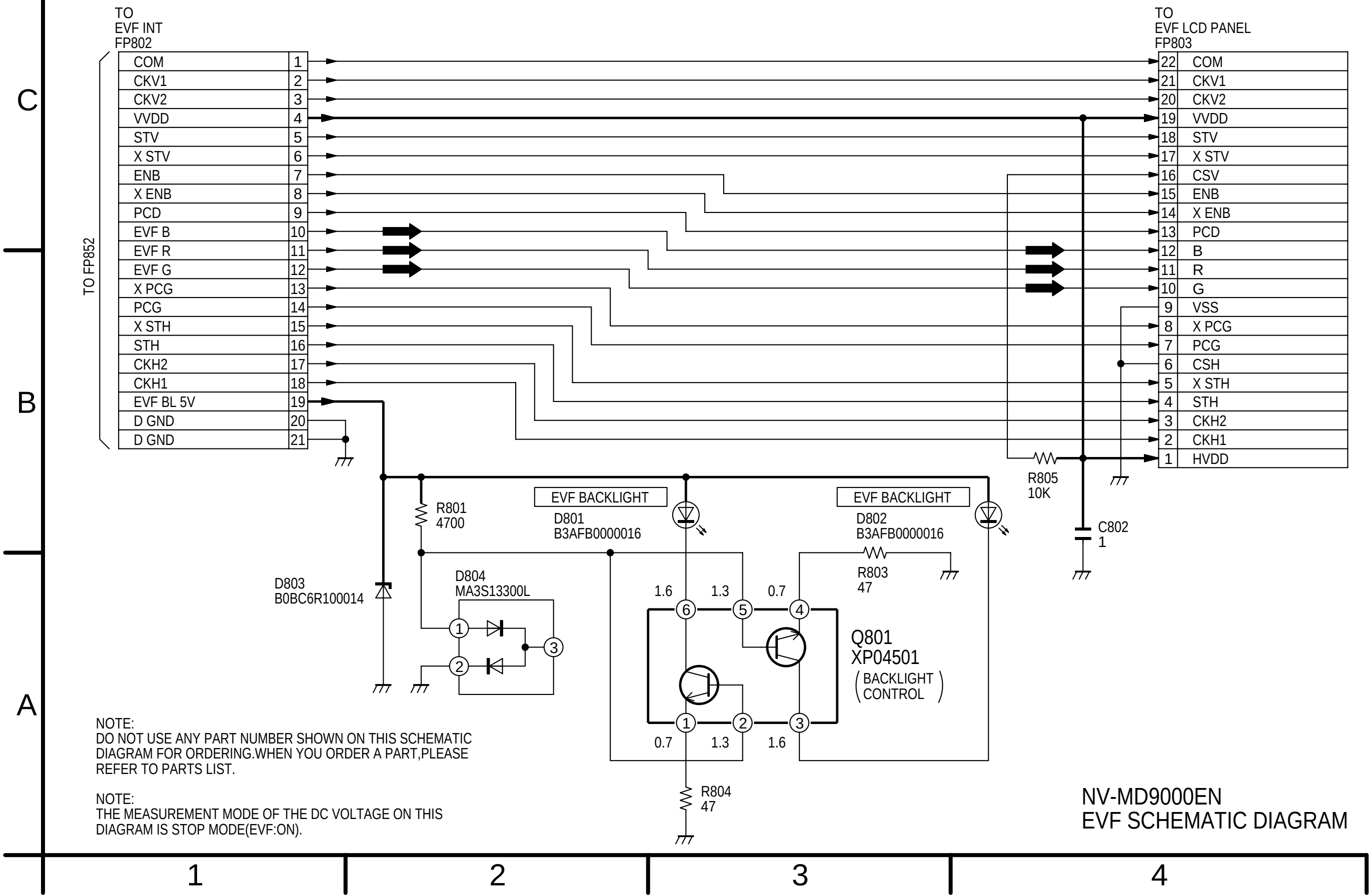

C
B
A
1
2
3
4
MR4
MR3
FP802
20 21
15
10
5
1
Q801
R803
R804
D804
R801
D803
D802
D801
C802
R805
MR1
MR2
FP803
1
5
10
15
20 22
2
1
3
4
5
6

(COMPONENT SIDE) (FOIL SIDE)

NV-MD9000EN
EVF C.B.A.

(EVF C.B.A.)

➡ :VIDEO MAIN SIGNAL PATH

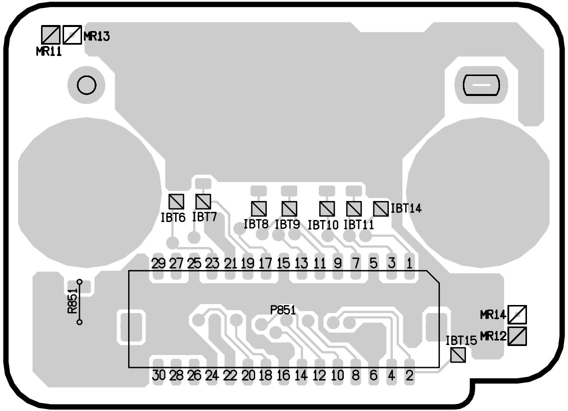

TO
EVF INT
FP802
TO FP852
COM 1
CKV1 2
CKV2 3
VVDD 4
STV 5
X STV 6
ENB 7
X ENB 8
PCD 9
EVF B 10
EVF R 11
EVF G 12
X PCG 13
PCG 14
X STH 15
STH 16
CKH2 17
CKH1 18
EVF BL 5V 19
D GND 20
D GND 21
TO
EVF LCD PANEL
FP803
22 COM
21 CKV1
20 CKV2
19 VVDD
18 STV
17 X STV
16 CSV
15 ENB
14 X ENB
13 PCD
12 B
11 R
10 G
9 VSS
8 X PCG
7 PCG
6 CSH
5 X STH
4 STH
3 CKH2
2 CKH1
1 HVDD
R805
10K
C802
1
R801
4700
EVF BACKLIGHT
D801
B3AFB0000016
EVF BACKLIGHT
D802
B3AFB0000016
R803
47
D803
B0BC6R100014
D804
MA3S13300L
1.6
1.3
0.7
0.7
1.3
1.6
Q801
XP04501
(BACKLIGHT CONTROL)
R804
47
C
B
A
1
2
3
4

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

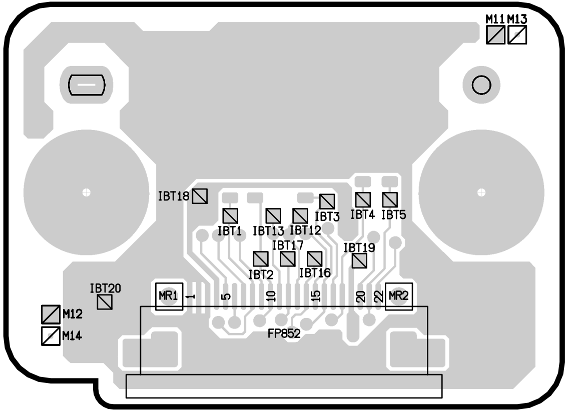
NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE(EVF:ON).

NV-MD9000EN
EVF SCHEMATIC DIAGRAM

(VEP28298A)


B
A
1
2
MR11
MR13
IBT6
IBT7
IBT8
IBT9
IBT10
IBT11
IBT14
29 27 25 23 21 19 17 15 13 11 9 7 5 3 1
R851
P851
MR14
MR12
IBT15
30 28 26 24 22 20 18 16 14 12 10 8 6 4 2

(COMPONENT SIDE)

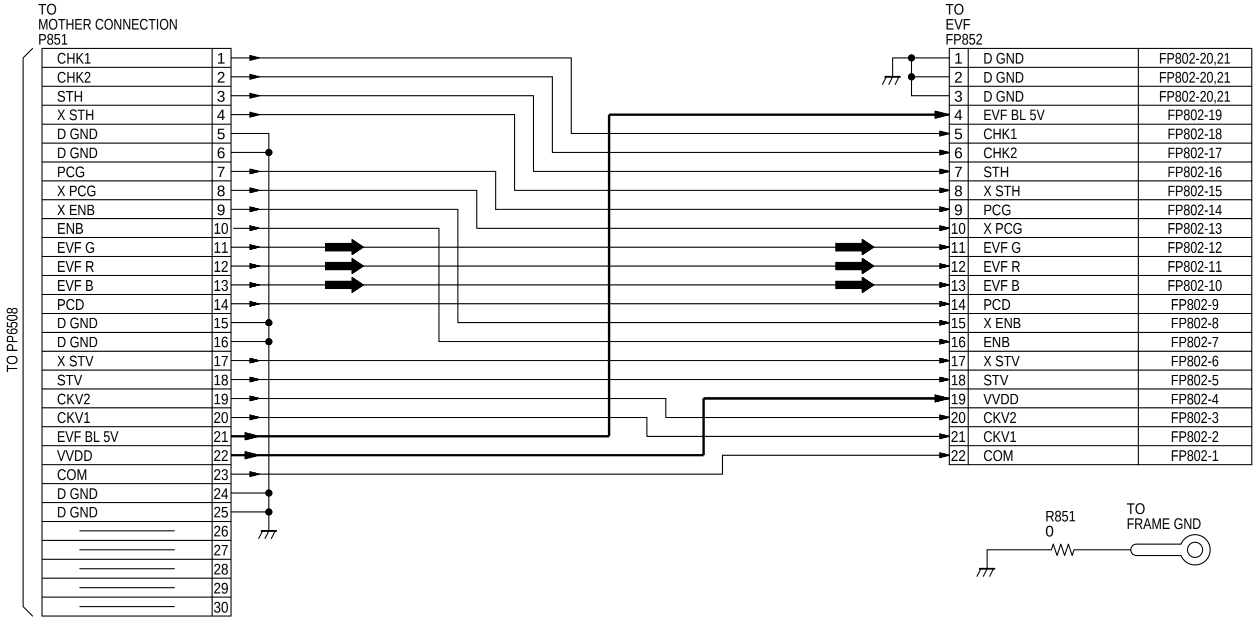

M11
M13
IBT18
IBT3
IBT4
IBT5
IBT1
IBT13
IBT12
IBT17
IBT19
IBT2
IBT16
IBT20
MR1
1
5
10
15
20
22
MR2
M12
M14
FP852
3
4
5

(FOIL SIDE)

NV-MD9000EN
EVF INT C.B.A.

(EVF INT C.B.A.)

:VIDEO MAIN SIGNAL PATH


TO
MOTHER CONNECTION
P851
TO PP6508
CHK1 1
CHK2 2
STH 3
X STH 4
D GND 5
D GND 6
PCG 7
X PCG 8
X ENB 9
ENB 10
EVF G 11
EVF R 12
EVF B 13
PCD 14
D GND 15
D GND 16
X STV 17
STV 18
CKV2 19
CKV1 20
EVF BL 5V 21
VVDD 22
COM 23
D GND 24
D GND 25
26
27
28
29
30
TO
EVF
FP852
1 D GND FP802-20,21
2 D GND FP802-20,21
3 D GND FP802-20,21
4 EVF BL 5V FP802-19
5 CHK1 FP802-18
6 CHK2 FP802-17
7 STH FP802-16
8 X STH FP802-15
9 PCG FP802-14
10 X PCG FP802-13
11 EVF G FP802-12
12 EVF R FP802-11
13 EVF B FP802-10
14 PCD FP802-9
15 X ENB FP802-8
16 ENB FP802-7
17 X STV FP802-6
18 STV FP802-5
19 VVDD FP802-4
20 CKV2 FP802-3
21 CKV1 FP802-2
22 COM FP802-1
R851
0
TO
FRAME GND
C
B
A
1
2
3
4

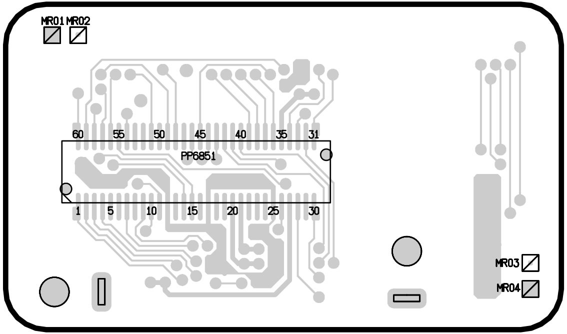
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC
DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE
REFER TO PARTS LIST.

NV-MD9000EN
EVF INT SCHEMATIC DIAGRAM

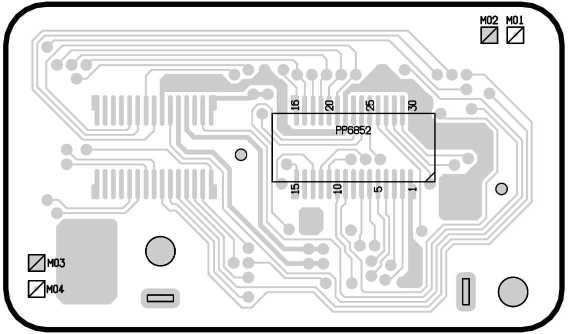
(VEP06F19A)

NOTE:MULTILAYER C.B.A.

THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT-PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.


MR01
MR02
60
55
50
45
40
35
31
PP6851
1
5
10
15
20
25
30
MR03
MR04

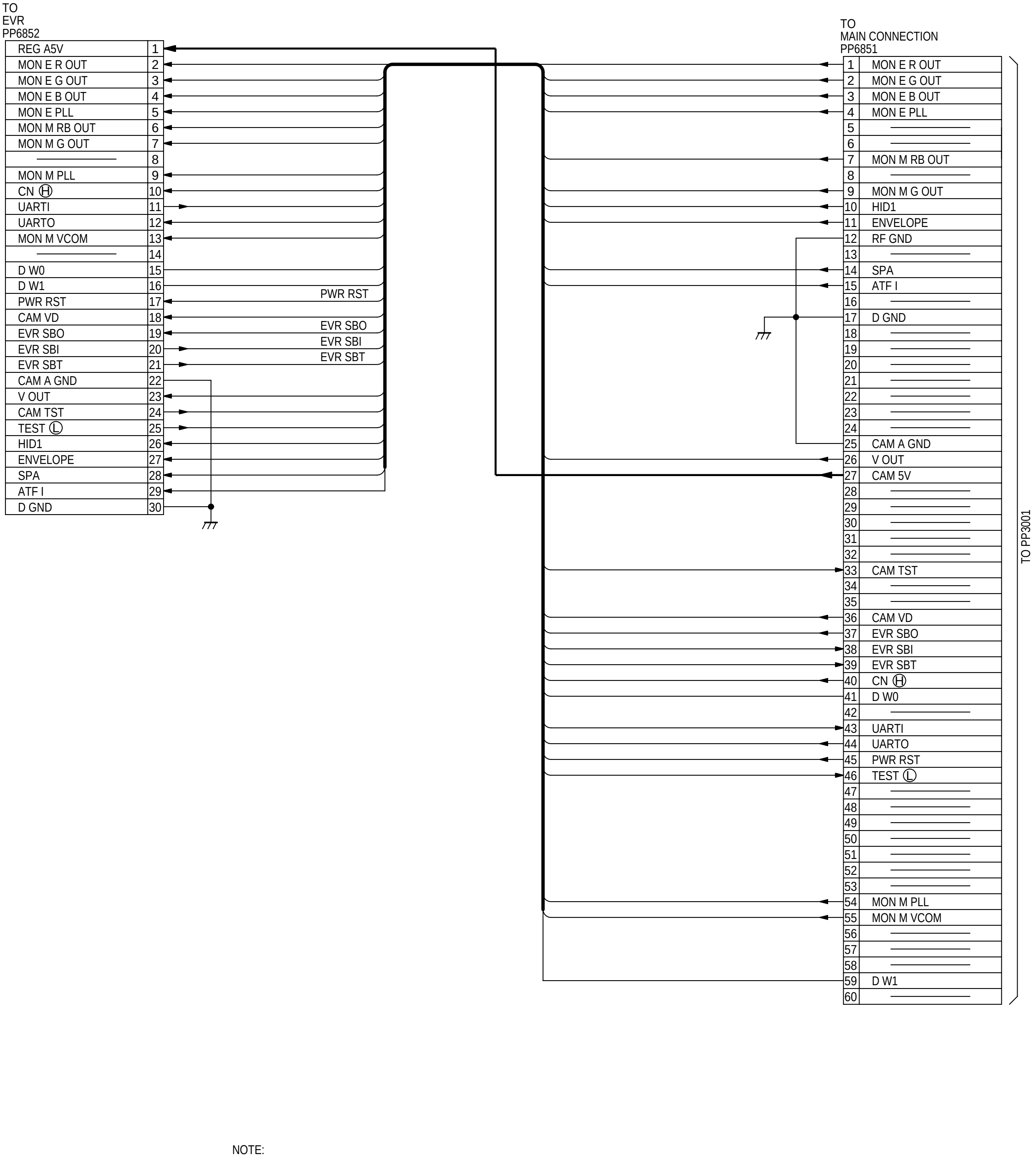
(COMPONENT SIDE)


M02
M01
16
20
25
30
PP6852
15
10
5
1
M03
M04

(FOIL SIDE)

NV-MD9000EN
EVR INT C.B.A.

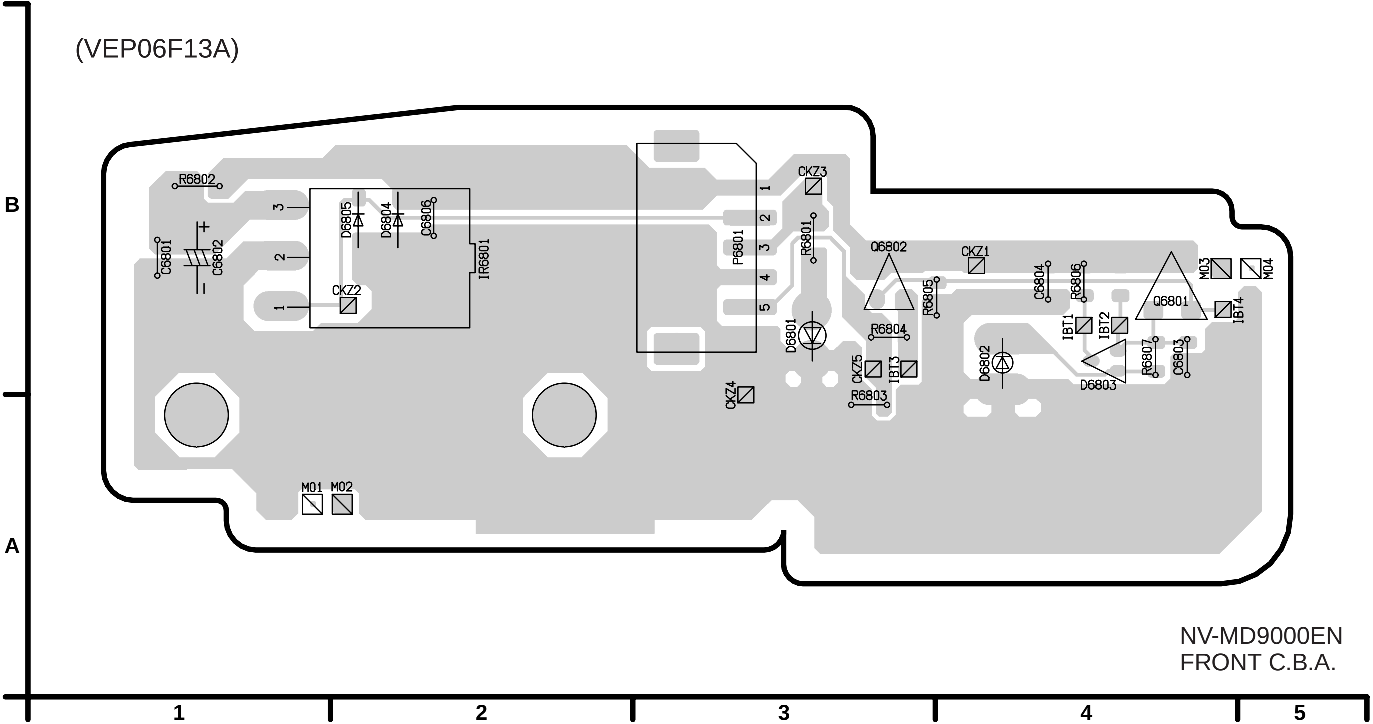
(EVR INT C.B.A.)


TO
EVR
PP6852
1 REG A5V
2 MON E R OUT
3 MON E G OUT
4 MON E B OUT
5 MON E PLL
6 MON M RB OUT
7 MON M G OUT
8
9 MON M PLL
10 CN Ⓗ
11 UARTI
12 UARTO
13 MON M VCOM
14
15 D W0
16 D W1
17 PWR RST
18 CAM VD
19 EVR SBO
20 EVR SBI
21 EVR SBT
22 CAM A GND
23 V OUT
24 CAM TST
25 TEST Ⓛ
26 HID1
27 ENVELOPE
28 SPA
29 ATF I
30 D GND
PWR RST
EVR SBO
EVR SBI
EVR SBT
TO
MAIN CONNECTION
PP6851
1 MON E R OUT
2 MON E G OUT
3 MON E B OUT
4 MON E PLL
5
6
7 MON M RB OUT
8
9 MON M G OUT
10 HID1
11 ENVELOPE
12 RF GND
13
14 SPA
15 ATF I
16
17 D GND
18
19
20
21
22
23
24
25 CAM A GND
26 V OUT
27 CAM 5V
28
29
30
31
32
33 CAM TST
34
35
36 CAM VD
37 EVR SBO
38 EVR SBI
39 EVR SBT
40 CN Ⓗ
41 D W0
42
43 UARTI
44 UARTO
45 PWR RST
46 TEST Ⓛ
47
48
49
50
51
52
53
54 MON M PLL
55 MON M VCOM
56
57
58
59 D W1
60
TO PP3001

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

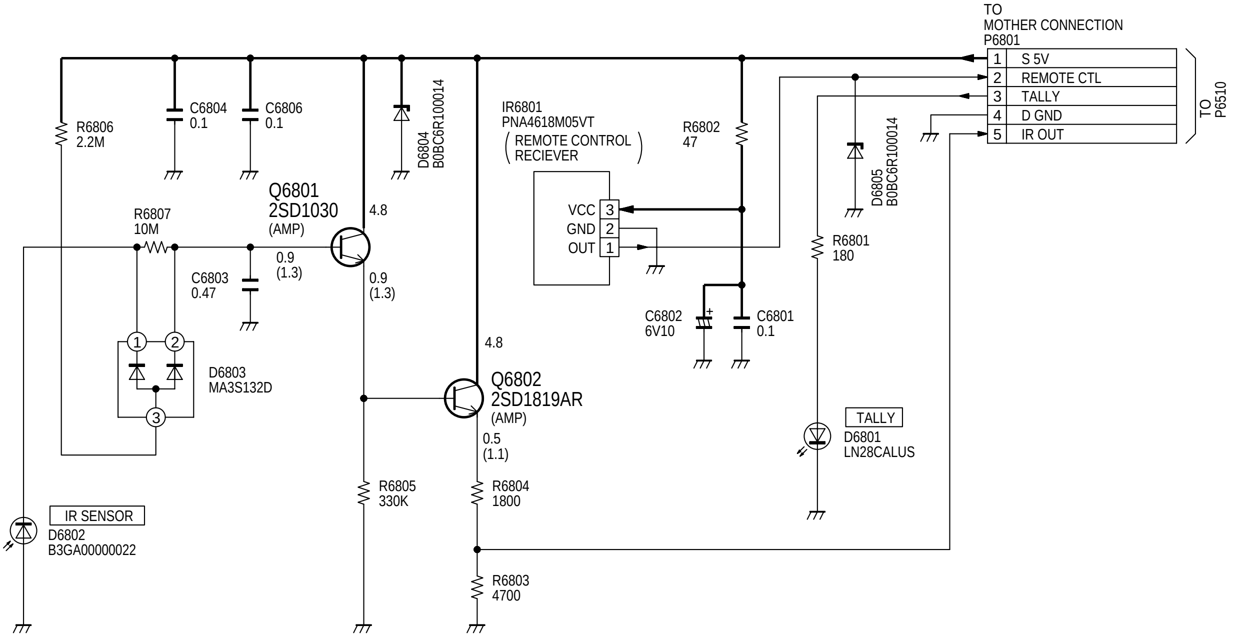
NV-MD9000EN
EVR INT SCHEMATIC DIAGRAM

(VEP06F13A)


B
A
1
2
3
4
5
R6802
C6801
C6802
+
−
3
2
1
D6805
D6804
C6806
CKZ2
IR6801
P6801
1
2
3
4
5
CKZ3
R6801
D6801
Q6802
CKZ1
R6805
R6804
CKZ5
IBT3
R6803
CKZ4
C6804
R6806
Q6801
M03
M04
IBT4
IBT1
IBT2
D6802
D6803
R6807
C6803
M01
M02

NV-MD9000EN
FRONT C.B.A.

(FRONT C.B.A.)


TO
MOTHER CONNECTION
P6801
1 S 5V
2 REMOTE CTL
3 TALLY
4 D GND
5 IR OUT
TO
P6510
R6806
2.2M
C6804
0.1
C6806
0.1
D6804
B0BC6R100014
IR6801
PNA4618M05VT
(REMOTE CONTROL
RECIEVER)
R6802
47
D6805
B0BC6R100014
Q6801
2SD1030
(AMP)
4.8
R6807
10M
VCC 3
GND 2
OUT 1
R6801
180
0.9
(1.3)
C6803
0.47
0.9
(1.3)
C6802
6V10
C6801
0.1
4.8
D6803
MA3S132D
1
2
3
Q6802
2SD1819AR
(AMP)
TALLY
D6801
LN28CALUS
0.5
(1.1)
R6805
330K
R6804
1800
IR SENSOR
D6802
B3GA00000022
R6803
4700

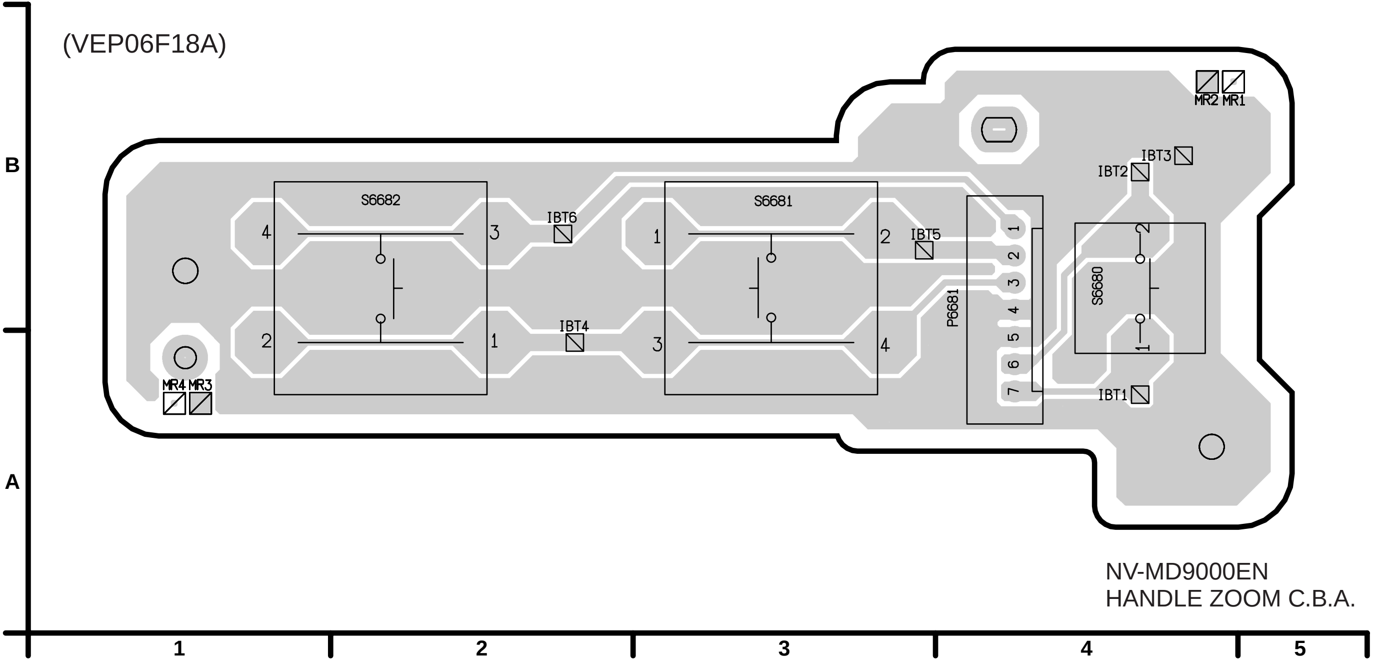
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS PLAYBACK MODE.
THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS( )ON THIS DIAGRAM IS RECORD MODE.
(SP MODE)

NV-MD9000EN
FRONT SCHEMATIC DIAGRAM

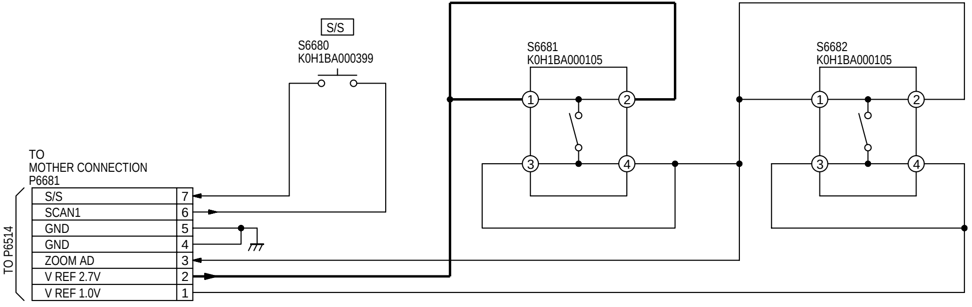
C
B
A
1
2
3
4

(VEP06F18A)


B
A
1
2
3
4
5
S6682
S6681
S6680
P6681
IBT1
IBT2
IBT3
IBT4
IBT5
IBT6
MR1
MR2
MR3
MR4

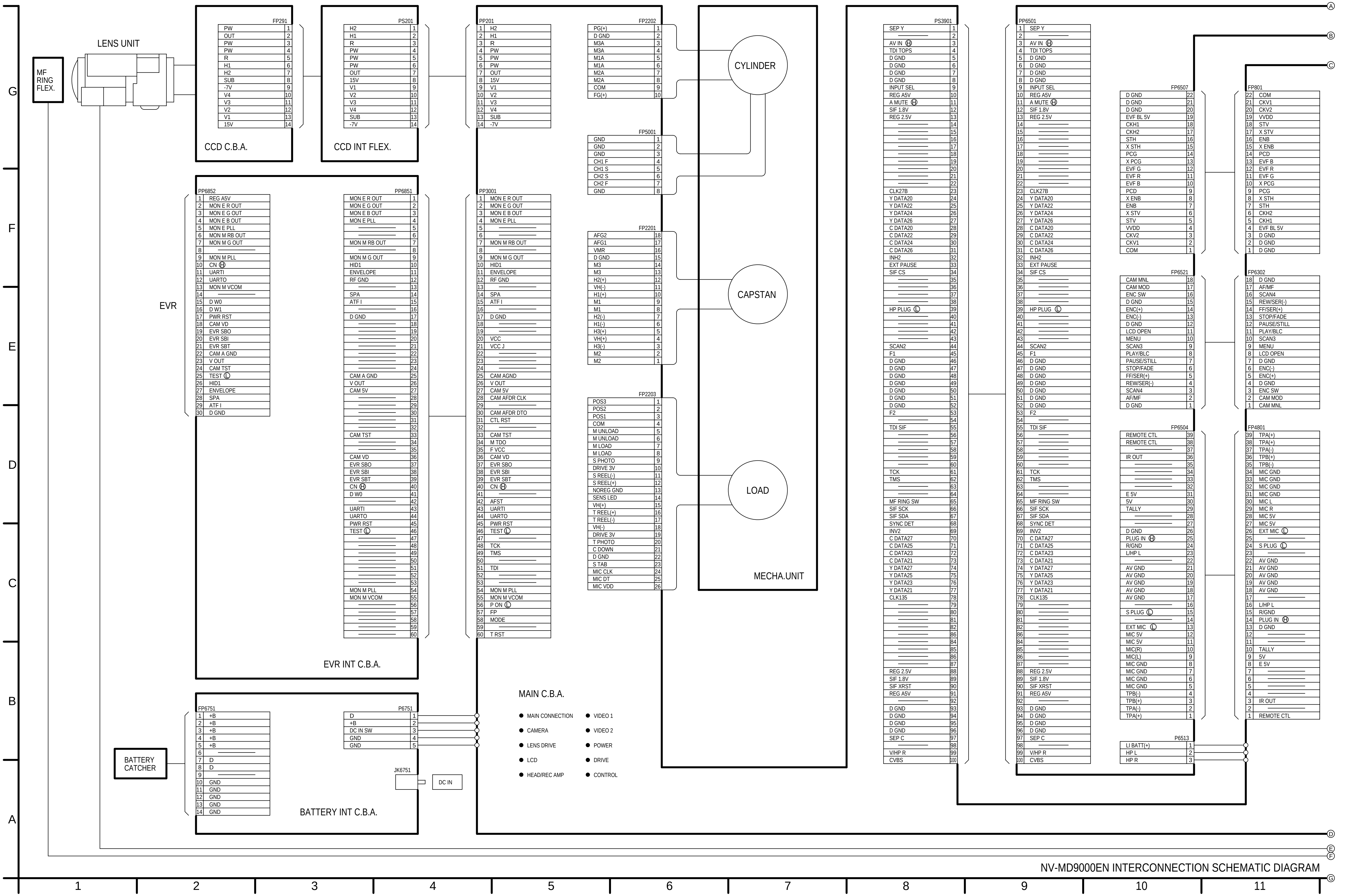
NV-MD9000EN
HANDLE ZOOM C.B.A.

(HANDLE ZOOM C.B.A.)

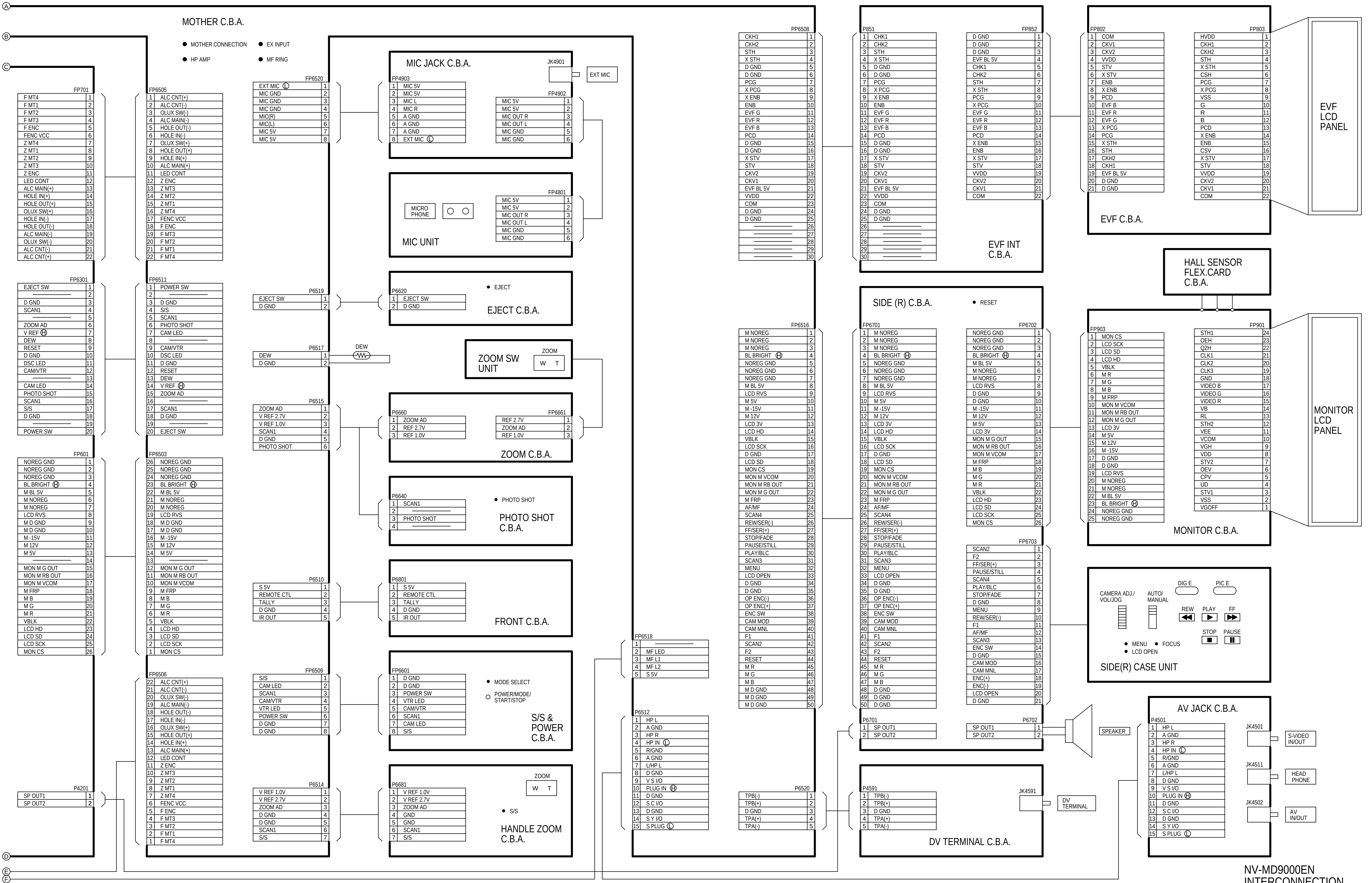

S/S
S6680
K0H1BA000399
S6681
K0H1BA000105
S6682
K0H1BA000105
1
2
3
4
1
2
3
4
TO
MOTHER CONNECTION
P6681
TO P6514
S/S 7
SCAN1 6
GND 5
GND 4
ZOOM AD 3
V REF 2.7V 2
V REF 1.0V 1
B
A
1
2
3
4

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC
DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE
REFER TO PARTS LIST.

NV-MD9000EN
HANDLE ZOOM SCHEMATIC DIAGRAM


LENS UNIT
MF RING FLEX.
CCD C.B.A.
FP291
CCD INT FLEX.
PS201
EVR
EVR INT C.B.A.
PP6852
PP6851
BATTERY CATCHER
BATTERY INT C.B.A.
FP6751
P6751
JK6751
DC IN
MAIN C.B.A.
PP201
PP3001
FP2202
FP5001
FP2201
FP2203
CYLINDER
CAPSTAN
LOAD
MECHA.UNIT
PS3901
PP6501
FP6507
FP6521
FP6504
P6513
FP801
FP6302
FP4801
● MAIN CONNECTION
● CAMERA
● LENS DRIVE
● LCD
● HEAD/REC AMP
● VIDEO 1
● VIDEO 2
● POWER
● DRIVE
● CONTROL
A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
10
11

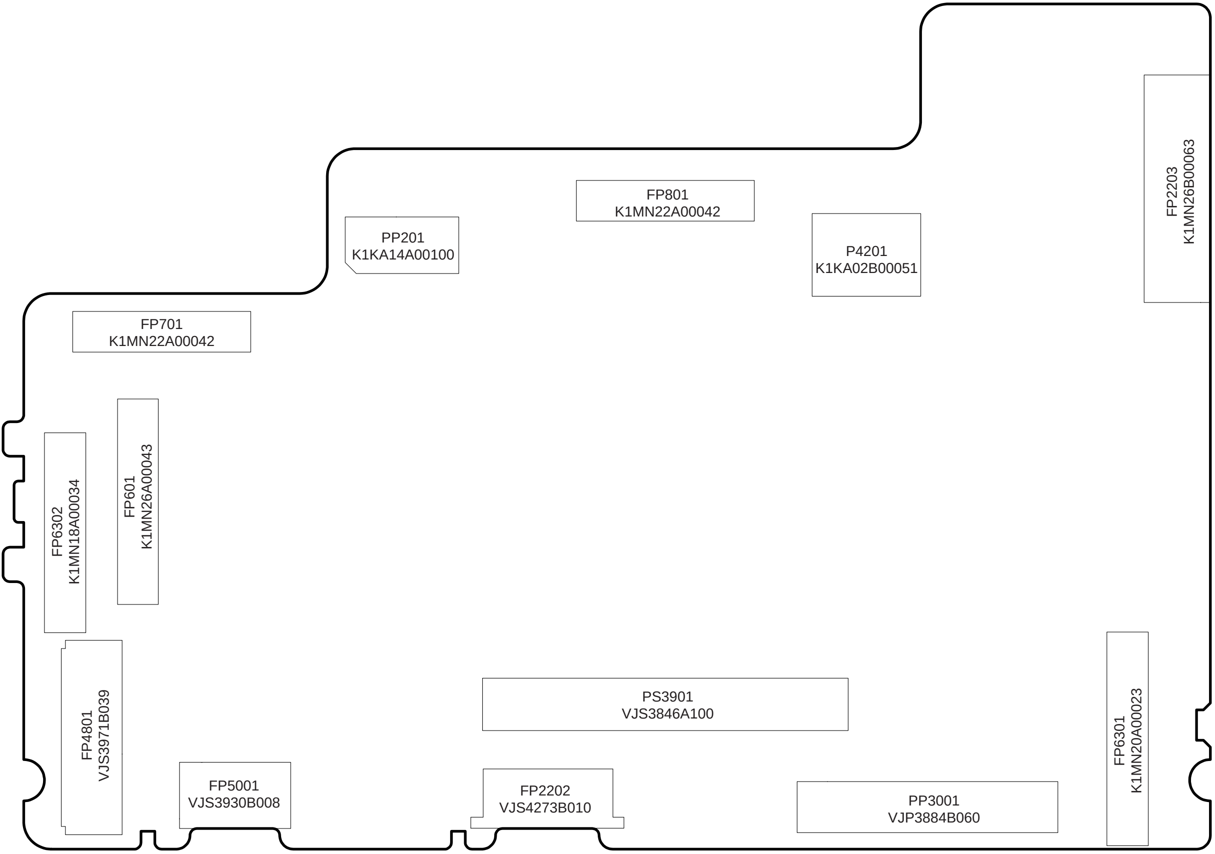
NV-MD9000EN INTERCONNECTION SCHEMATIC DIAGRAM


MOTHER C.B.A.
● MOTHER CONNECTION
● EX INPUT
● HP AMP
● MF RING
FP701
FP6505
FP6301
FP6511
FP601
FP6503
FP6506
P4201
FP6520
P6519
P6517
P6515
P6510
FP6509
P6514
MIC JACK C.B.A.
JK4901
EXT MIC
FP4903
FP4902
MIC UNIT
MICRO PHONE
FP4801
EJECT C.B.A.
P6620
● EJECT
DEW
ZOOM SW UNIT
ZOOM
W T
ZOOM C.B.A.
P6660
FP6661
PHOTO SHOT C.B.A.
FP6640
● PHOTO SHOT
FRONT C.B.A.
P6801
S/S & POWER C.B.A.
FP6601
● MODE SELECT
○ POWER/MODE/ START/STOP
HANDLE ZOOM C.B.A.
P6681
● S/S
FP6518
P6512
PP6508
FP6516
P6520
EVF INT C.B.A.
P851
FP852
SIDE (R) C.B.A.
● RESET
FP6701
FP6702
FP6703
P6701
P6702
SPEAKER
DV TERMINAL C.B.A.
P4591
JK4591
DV TERMINAL
EVF C.B.A.
FP802
FP803
EVF LCD PANEL
HALL SENSOR FLEX.CARD C.B.A.
MONITOR C.B.A.
FP903
FP901
MONITOR LCD PANEL
SIDE(R) CASE UNIT
CAMERA ADJ./ VOL/JOG
AUTO/ MANUAL
DIG E
PIC E
REW
PLAY
FF
STOP
PAUSE
● MENU
● FOCUS
● LCD OPEN
AV JACK C.B.A.
P4501
JK4501
S-VIDEO IN/OUT
JK4511
HEAD PHONE
JK4502
AV IN/OUT
A
B
C
D
E
F
G

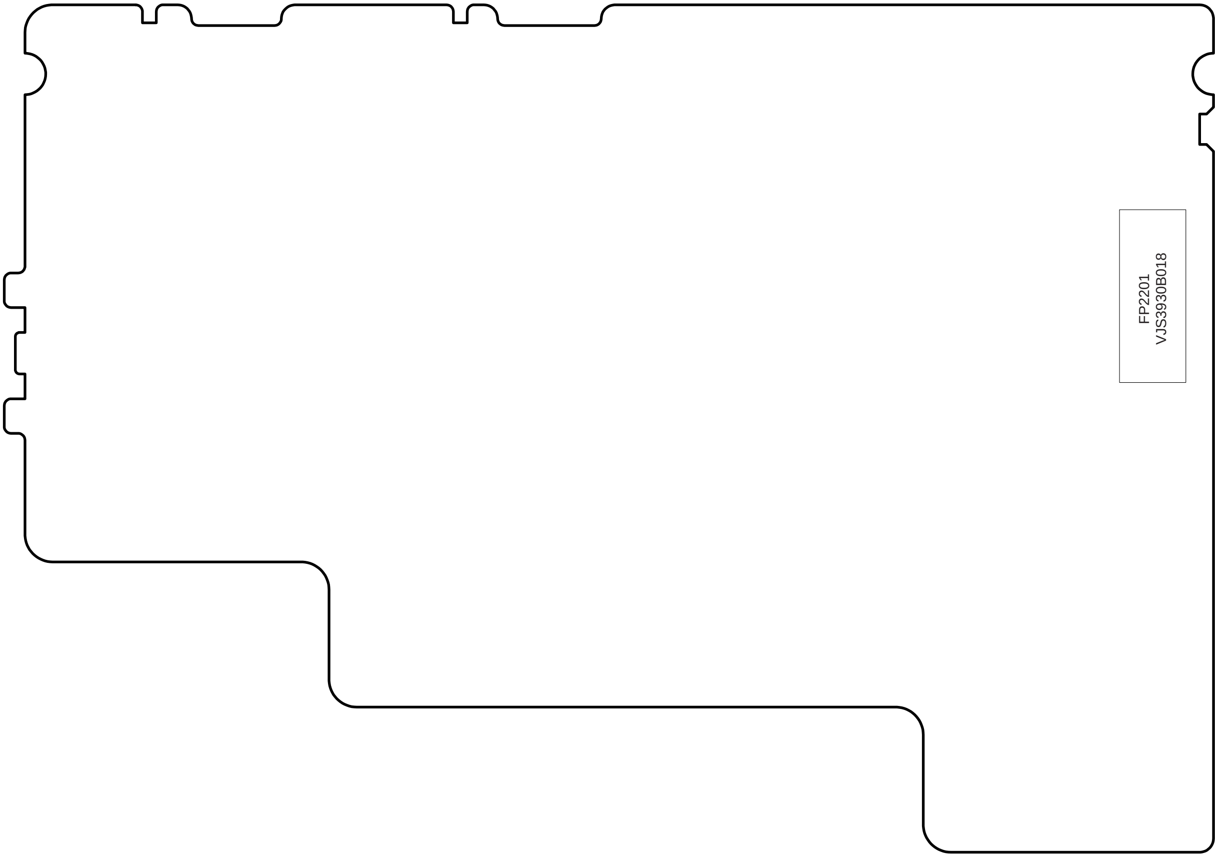
NV-MD9000EN INTERCONNECTION SCHEMATIC DIAGRAM

NV-MD9000EN
INTERCONNECTION
SCHEMATIC DIAGRAM

12 13 14 15 16 17 18 19 20 21 22

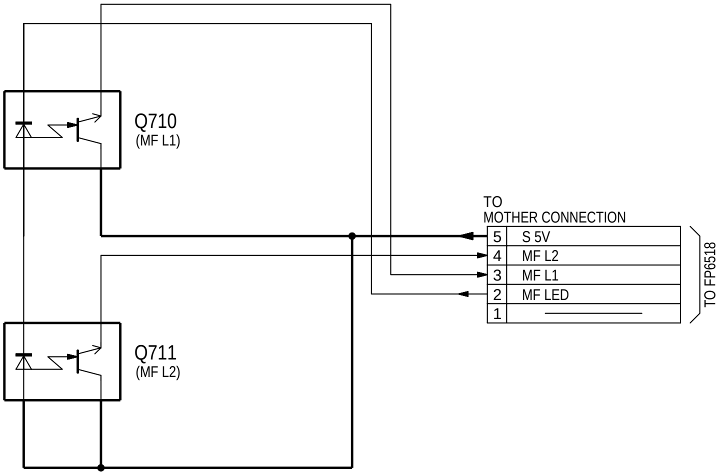

FP801
K1MN22A00042
PP201
K1KA14A00100
P4201
K1KA02B00051
FP2203
K1MN26B00063
FP701
K1MN22A00042
FP6302
K1MN18A00034
FP601
K1MN26A00043
FP4801
VJS3971B039
PS3901
VJS3846A100
FP6301
K1MN20A00023
FP5001
VJS3930B008
FP2202
VJS4273B010
PP3001
VJP3884B060

(COMPONENT SIDE)


FP2201
VJS3930B018

(FOIL SIDE)

(MF RING UNIT)


Q710
(MF L1)
Q711
(MF L2)
TO
MOTHER CONNECTION
5
S 5V
4
MF L2
3
MF L1
2
MF LED
1
TO FP6518

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

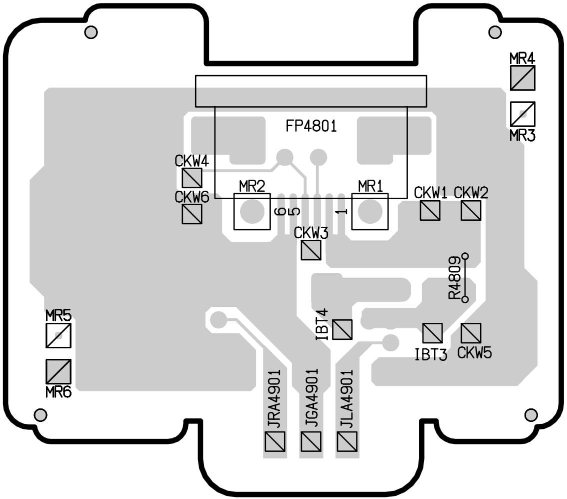
NV-MD9000EN
MF RING UNIT SCHEMATIC DIAGRAM

1
2
3

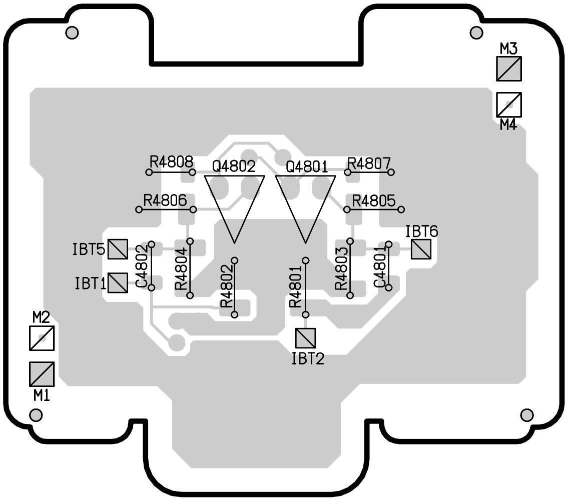
(VYK0L54)

NOTE:MULTILAYER C.B.A.

THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT-PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.


MR4
MR3
FP4801
CKW4
CKW6
MR2
MR1
6
5
1
CKW1
CKW2
CKW3
R4809
MR5
MR6
IBT4
IBT3
CKW5
JRA4901
JGA4901
JLA4901

(COMPONENT SIDE)

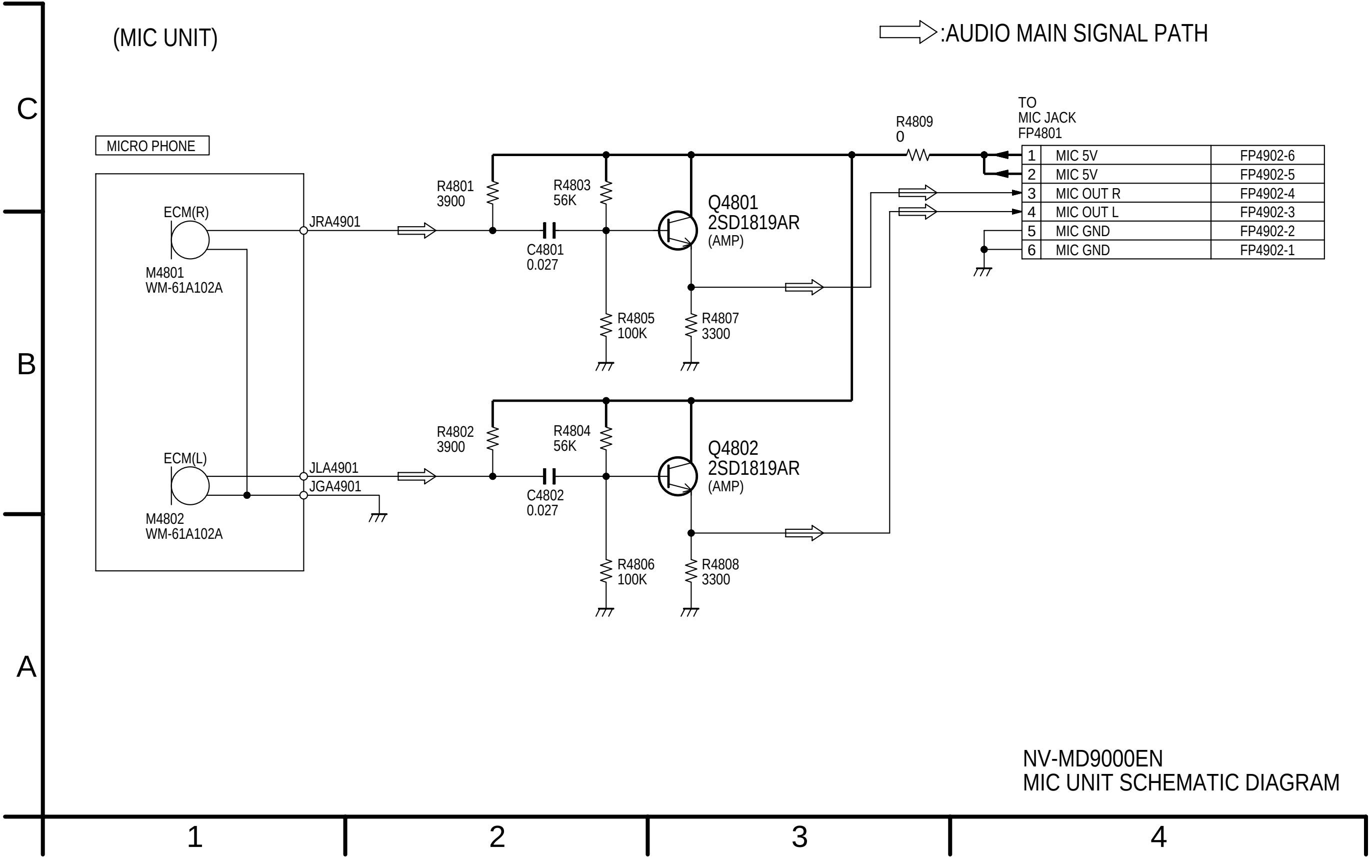

M3
M4
R4808
Q4802
Q4801
R4807
R4806
R4805
IBT6
IBT5
IBT1
C4802
R4804
R4802
R4801
R4803
C4801
M2
M1
IBT2

(FOIL SIDE)

C
B
A
1
2
3
4
5

NV-MD9000EN
MIC UNIT

(MIC UNIT)

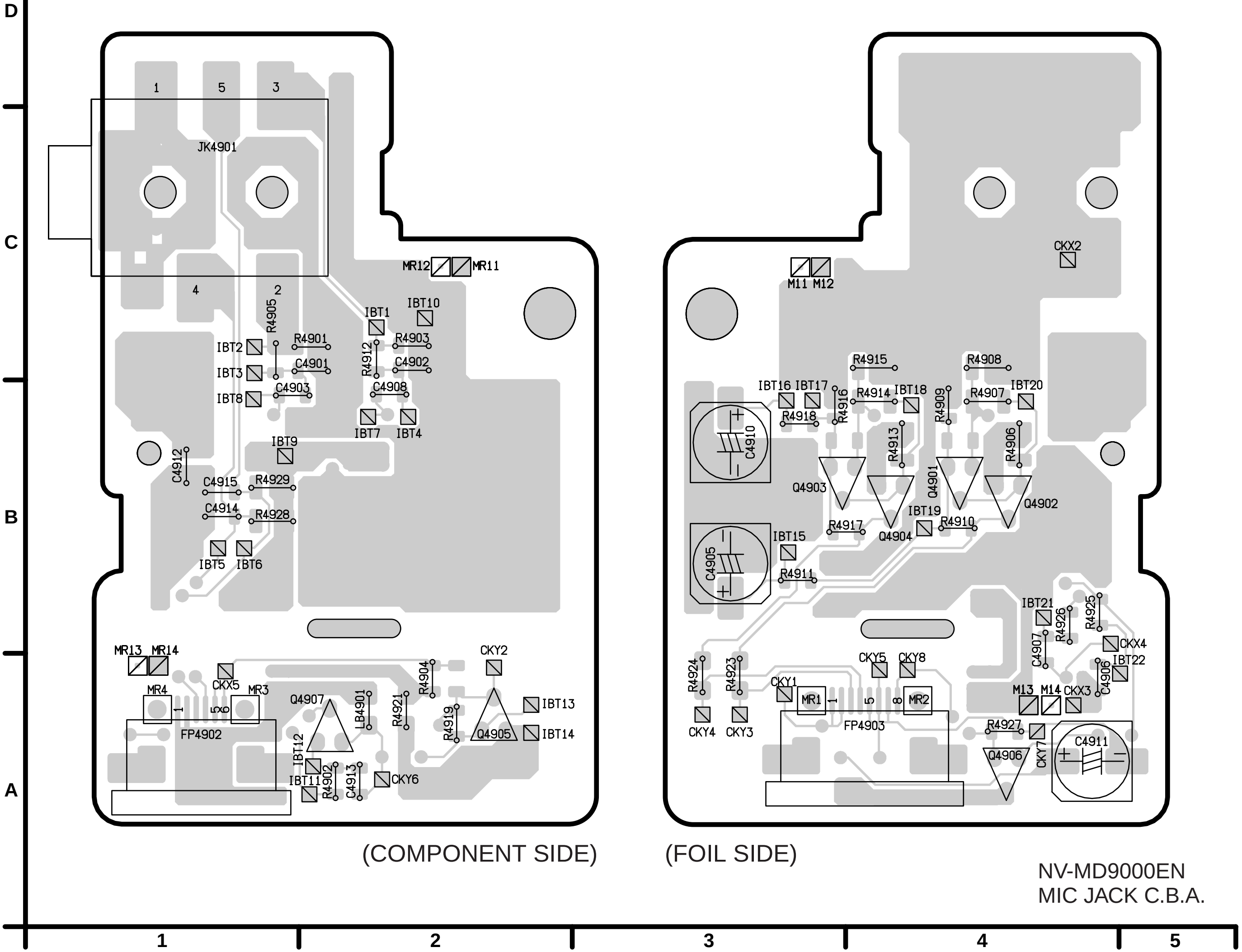

:AUDIO MAIN SIGNAL PATH
C
B
A
1
2
3
4
MICRO PHONE
ECM(R)
M4801
WM-61A102A
ECM(L)
M4802
WM-61A102A
JRA4901
JLA4901
JGA4901
R4801
3900
R4802
3900
C4801
0.027
C4802
0.027
R4803
56K
R4804
56K
R4805
100K
R4806
100K
R4807
3300
R4808
3300
Q4801
2SD1819AR
(AMP)
Q4802
2SD1819AR
(AMP)
R4809
0
TO
MIC JACK
FP4801
1 MIC 5V FP4902-6
2 MIC 5V FP4902-5
3 MIC OUT R FP4902-4
4 MIC OUT L FP4902-3
5 MIC GND FP4902-2
6 MIC GND FP4902-1

NV-MD9000EN
MIC UNIT SCHEMATIC DIAGRAM

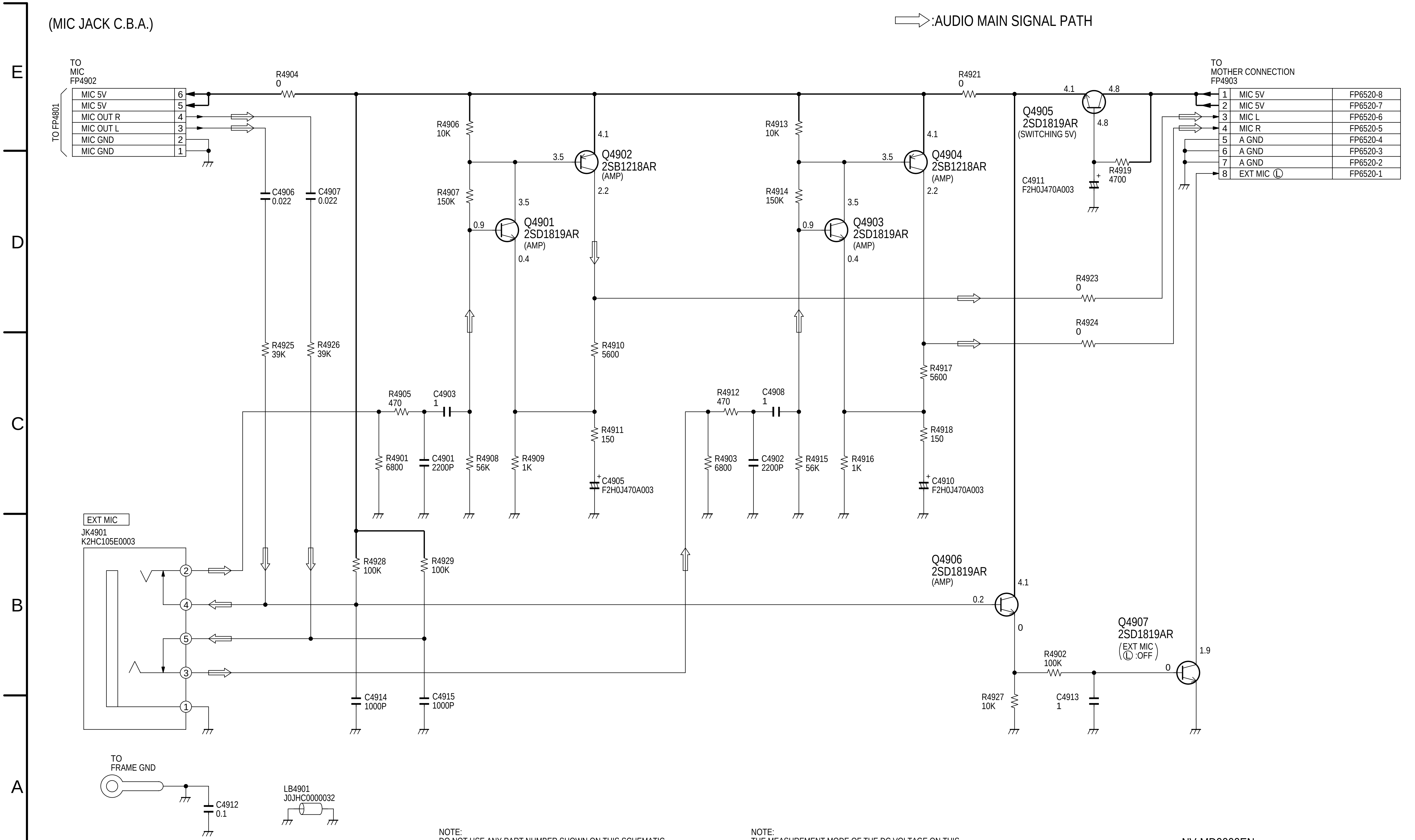
(VEP04823A)

NOTE:MULTILAYER C.B.A.

THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT-PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.


D
C
B
A
1
2
3
4
5
1
5
3
JK4901
4
2
MR12
MR11
IBT1
IBT10
R4905
R4901
R4903
IBT2
IBT3
IBT8
R4912
C4901
C4902
C4903
C4908
IBT7
IBT4
IBT9
C4912
C4915
R4929
C4914
R4928
IBT5
IBT6
MR13
MR14
CKX5
MR4
MR3
1
5
8
FP4902
Q4907
LB4901
R4921
R4904
CKY2
R4919
Q4905
IBT13
IBT14
IBT12
IBT11
R4902
C4913
CKY6
(COMPONENT SIDE)
M11
M12
CKX2
R4915
R4908
IBT16
IBT17
R4916
R4914
IBT18
R4909
R4907
IBT20
R4918
C4910
R4913
R4906
Q4903
Q4901
Q4904
Q4902
IBT19
R4917
R4910
IBT15
C4905
R4911
IBT21
R4926
R4925
CKX4
C4907
IBT22
C4906
R4924
R4923
CKY5
CKY8
CKY1
MR1
1
5
8
MR2
FP4903
M13
M14
CKX3
CKY4
CKY3
R4927
CKY7
Q4906
C4911
(FOIL SIDE)

NV-MD9000EN
MIC JACK C.B.A.


(MIC JACK C.B.A.)
:AUDIO MAIN SIGNAL PATH
E
D
C
B
A
TO
MIC
FP4902
TO FP4801
MIC 5V 6
MIC 5V 5
MIC OUT R 4
MIC OUT L 3
MIC GND 2
MIC GND 1
R4904
0
R4906
10K
R4907
150K
Q4902
2SB1218AR
(AMP)
Q4901
2SD1819AR
(AMP)
3.5
4.1
2.2
0.9
0.4
C4906
0.022
C4907
0.022
R4925
39K
R4926
39K
R4910
5600
R4905
470
C4903
1
R4901
6800
C4901
2200P
R4908
56K
R4909
1K
R4911
150
C4905
F2H0J470A003
R4913
10K
R4914
150K
Q4904
2SB1218AR
(AMP)
Q4903
2SD1819AR
(AMP)
R4912
470
C4908
1
R4903
6800
C4902
2200P
R4915
56K
R4916
1K
R4917
5600
R4918
150
C4910
F2H0J470A003
R4921
0
Q4905
2SD1819AR
(SWITCHING 5V)
4.8
C4911
F2H0J470A003
R4919
4700
R4923
0
R4924
0
TO
MOTHER CONNECTION
FP4903
1 MIC 5V FP6520-8
2 MIC 5V FP6520-7
3 MIC L FP6520-6
4 MIC R FP6520-5
5 A GND FP6520-4
6 A GND FP6520-3
7 A GND FP6520-2
8 EXT MIC Ⓛ FP6520-1
EXT MIC
JK4901
K2HC105E0003
② ④ ⑤ ③ ①
R4928
100K
R4929
100K
C4914
1000P
C4915
1000P
Q4906
2SD1819AR
(AMP)
0.2
0
Q4907
2SD1819AR
(EXT MIC Ⓛ :OFF)
1.9
R4902
100K
R4927
10K
C4913
1
TO
FRAME GND
C4912
0.1
LB4901
J0JHC0000032
1
2
3
4
5
6
7

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS REC MODE.

NV-MD9000EN
MIC JACK SCHEMATIC DIAGRAM

Monitor C.B.A.

Integrated Circuit

IC901	D-4
IC902	F-4
IC908	B-2

Transistor

Q901	E-4
Q902	D-2
Q903	C-4
Q905	C-4
Q906	F-3

Transistor & Resistor

QR901	B-3
QR902	F-4
QR903	D-2
QR904	C-3
QR905	F-3

Test Point

CL913	E-3
CL916	D-3
CL917	D-3
CL918	D-3
CL921	D-2
CL922	B-3
CL925	D-2
TL901	A-1
TL902	F-1

Connector

FP901	B-3
FP903	E-3

Diode

D903	E-1
D904	C-2
D905	C-3
D906	D-1
D908	F-3

Transformer

T901	E-2
T902	B-2

Coil

L901	E-2
L905	C-3

Capacitor

C903	E-4
C906	C-3
C907	E-3
C908	D-3
C909	E-3
C910	D-3
C911	C-3
C913	C-3
C916	D-3
C917	C-3
C918	C-3
C921	D-3
C923	E-1
C927	C-4
C929	D-4
C931	C-4
C932	C-4
C934	F-4
C935	C-3
C937	D-3
C938	C-3
C939	B-3
C940	C-2
C941	C-2
C942	C-2
C943	C-2
C944	B-2
C945	D-1
C946	E-2
C947	D-2
C948	D-2
C950	C-3
C952	C-4
C953	B-4

Resistor

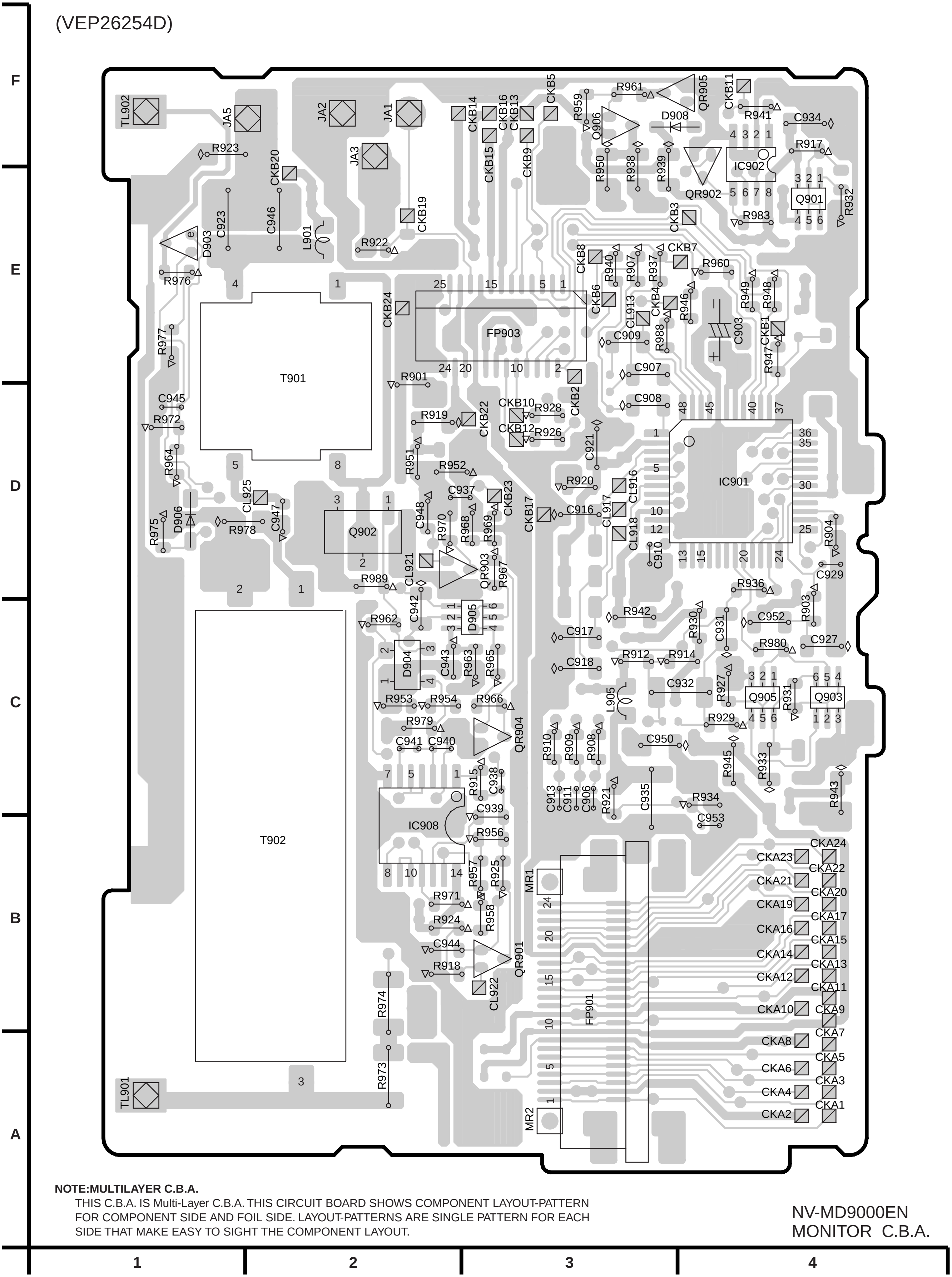
R901	D-2
R903	C-4
R904	D-4
R907	E-3
R908	C-3
R909	C-3
R910	C-3
R912	C-3
R914	C-4
R915	C-3
R917	F-4
R918	B-2
R919	D-2
R920	D-3
R921	C-3
R922	E-2
R923	F-1
R924	B-2
R925	B-3
R926	D-3
R927	C-4
R928	D-3
R929	C-4
R930	C-4
R931	C-4
R932	E-4
R933	C-4
R934	C-4
R936	D-4
R937	E-3
R938	E-3
R939	E-3
R940	E-3
R941	F-4
R942	C-3
R943	C-4
R945	C-4
R946	E-4
R947	E-4
R948	E-4
R949	E-4
R950	E-3
R951	D-2
R952	D-2
R953	C-2
R954	C-2
R956	B-3
R957	B-3
R958	B-3
R959	F-3
R960	E-4
R961	F-3
R962	C-2
R963	C-3
R964	D-1
R965	C-3
R966	C-3
R967	D-3
R968	D-3
R969	D-3
R970	D-2
R971	B-2
R972	D-1
R973	A-2
R974	B-2
R975	D-1
R976	E-1
R977	E-1
R978	D-1
R979	C-2
R980	C-4
R983	E-4
R988	E-3
R989	D-2

Jumper

JA1	F-2
JA2	F-2
JA3	F-2
JA5	F-2

ADDRESS INFORMATION

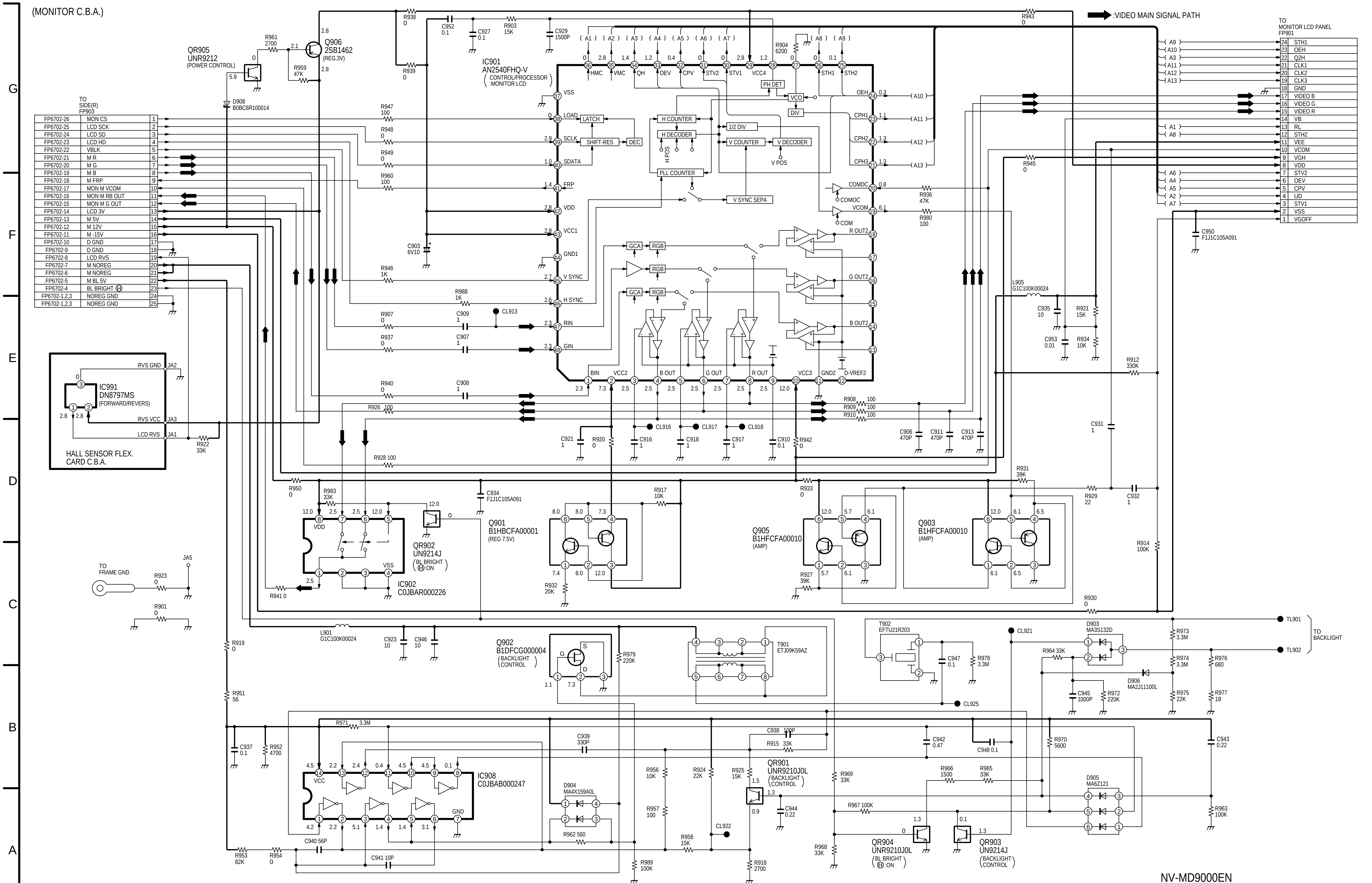
(VEP26254D)


F
E
D
C
B
A
1
2
3
4
TL902
JA5
JA2
JA1
JA3
CKB14
CKB16
CKB13
CKB5
CKB15
CKB9
CKB20
CKB19
R959
R961
QR905
CKB11
Q906
D908
R941
C934
4 3 2 1
R917
R923
R950
R938
R939
QR902
IC902
5 6 7 8
3 2 1
Q901
4 5 6
R932
R983
CKB3
C923
C946
L901
R922
D903
R976
CKB8
R940
R907
R937
CKB7
R960
25
15
5
1
CKB6
CKB4
R946
R949
R948
CKB24
FP903
CL913
C909
R988
C903
CKB1
R947
24
20
10
2
CKB2
C907
T901
R977
R901
C908
48
45
40
37
C945
R972
R919
CKB22
CKB10
R928
CKB12
R926
C921
36
35
R964
R951
R952
IC901
R920
CL916
30
CL925
D906
C937
CKB23
C948
CKB17
C916
CL917
R975
R978
C947
Q902
R970
R968
R969
CL918
C910
13
15
20
24
25
R904
C929
QR903
R967
R989
CL921
R936
R903
C942
D905
R942
R930
C931
C952
R962
C917
R980
C927
D904
C943
R963
R965
R912
R914
C918
R927
Q905
R931
Q903
R953
R954
R966
C932
L905
R929
R979
QR904
R910
R909
R908
C950
R945
R933
C941
C940
R915
C938
C913
C911
C906
R921
C935
R934
C953
R943
IC908
C939
R956
CKA24
CKA23
CKA22
CKA21
CKA20
CKA19
CKA17
CKA16
CKA15
CKA14
CKA13
CKA12
CKA11
CKA10
CKA9
CKA8
CKA7
CKA6
CKA5
CKA4
CKA3
CKA2
CKA1
T902
R957
R925
MR1
R971
R958
R924
C944
QR901
R918
CL922
FP901
R974
R973
TL901
MR2

NOTE:MULTILAYER C.B.A.

THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT-PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.

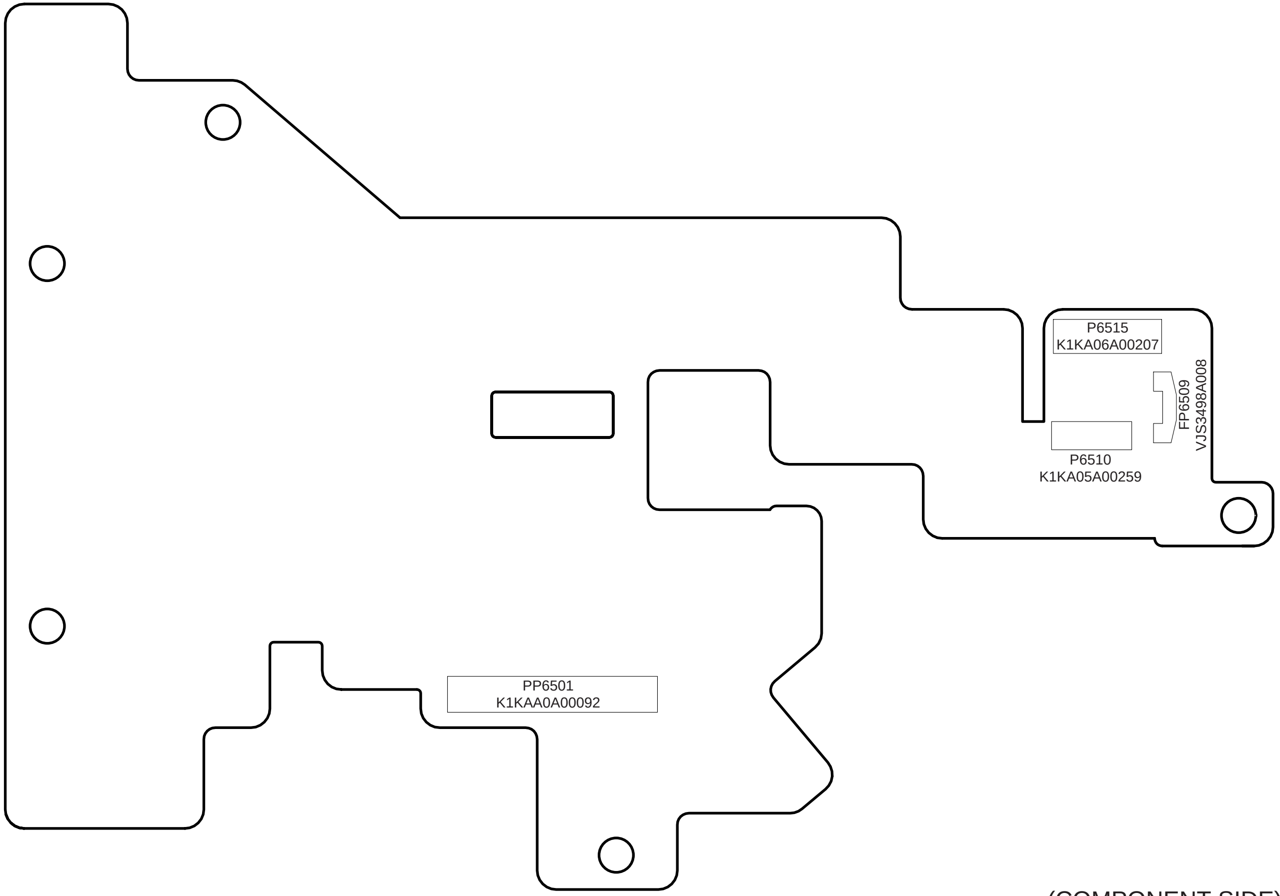
NV-MD9000EN
MONITOR C.B.A.


(MONITOR C.B.A.)
:VIDEO MAIN SIGNAL PATH
QR905
UNR9212
(POWER CONTROL)
Q906
2SB1462
(REG.3V)
D908
B0BC6R100014
IC901
AN2540FHQ-V
(CONTROL/PROCESSOR :MONITOR LCD)
TO SIDE(R) FP903
FP6702-26 MON CS
FP6702-25 LCD SCK
FP6702-24 LCD SD
FP6702-23 LCD HD
FP6702-22 VBLK
FP6702-21 M R
FP6702-20 M G
FP6702-19 M B
FP6702-18 M FRP
FP6702-17 MON M VCOM
FP6702-16 MON M RB OUT
FP6702-15 MON M G OUT
FP6702-14 LCD 3V
FP6702-13 M 5V
FP6702-12 M 12V
FP6702-11 M -15V
FP6702-10 D GND
FP6702-9 D GND
FP6702-8 LCD RVS
FP6702-7 M NOREG
FP6702-6 M NOREG
FP6702-5 M BL 5V
FP6702-4 BL BRIGHT Ⓗ
FP6702-1,2,3 NOREG GND
FP6702-1,2,3 NOREG GND
TO MONITOR LCD PANEL FP901
24 STH1
23 OEH
22 Q2H
21 CLK1
20 CLK2
19 CLK3
18 GND
17 VIDEO B
16 VIDEO G
15 VIDEO R
14 VB
13 RL
12 STH2
11 VEE
10 VCOM
9 VGH
8 VDD
7 STV2
6 OEV
5 CPV
4 UD
3 STV1
2 VSS
1 VGOFF
HMC VMC QH OEV CPV STV2 STV1 VCC4 STH1 STH2
VSS LOAD SCLK SDATA FRP VDD VCC1 GND1 V SYNC H SYNC RIN GIN
OEH CPH1 CPH2 CPH3 COMDC VCOM R OUT2 G OUT2 B OUT2
BIN VCC2 B OUT G OUT R OUT VCC3 GND2 D-VREF2
LATCH SHIFT-RES DEC H COUNTER H DECODER PLL COUNTER 1/2 DIV V COUNTER V DECODER V SYNC SEPA PH DET VCO DIV GCA RGB
H POS V POS COMOC COM
IC991
DN8797MS
(FORWARD/REVERS)
RVS GND RVS VCC LCD RVS JA1 JA2 JA3
HALL SENSOR FLEX. CARD C.B.A.
IC902
C0JBAR000226
QR902
UN9214J
(BL BRIGHT Ⓗ:ON)
Q901
B1HBCFA00001
(REG 7.5V)
Q905
B1HFCFA00010
(AMP)
Q903
B1HFCFA00010
(AMP)
TO FRAME GND
JA5
Q902
B1DFCG000004
(BACKLIGHT CONTROL)
T901
ETJ09K59AZ
T902
EFTU21R203
D903
MA3S132D
D906
MA2J11100L
TL901
TL902
TO BACKLIGHT
IC908
C0JBAB000247
D904
MA4X159A0L
QR901
UNR9210J0L
(BACKLIGHT CONTROL)
D905
MA6Z121
QR904
UNR9210J0L
(BL BRIGHT Ⓗ:ON)
QR903
UN9214J
(BACKLIGHT CONTROL)
L901 G1C100K00024
L905 G1C100K00024
C903 6V10
C934 F1J1C105A091
C950 F1J1C105A091
CL913 CL916 CL917 CL918 CL921 CL922 CL925
G F E D C B A
1 2 3 4 5 6 7 8 9 10 11

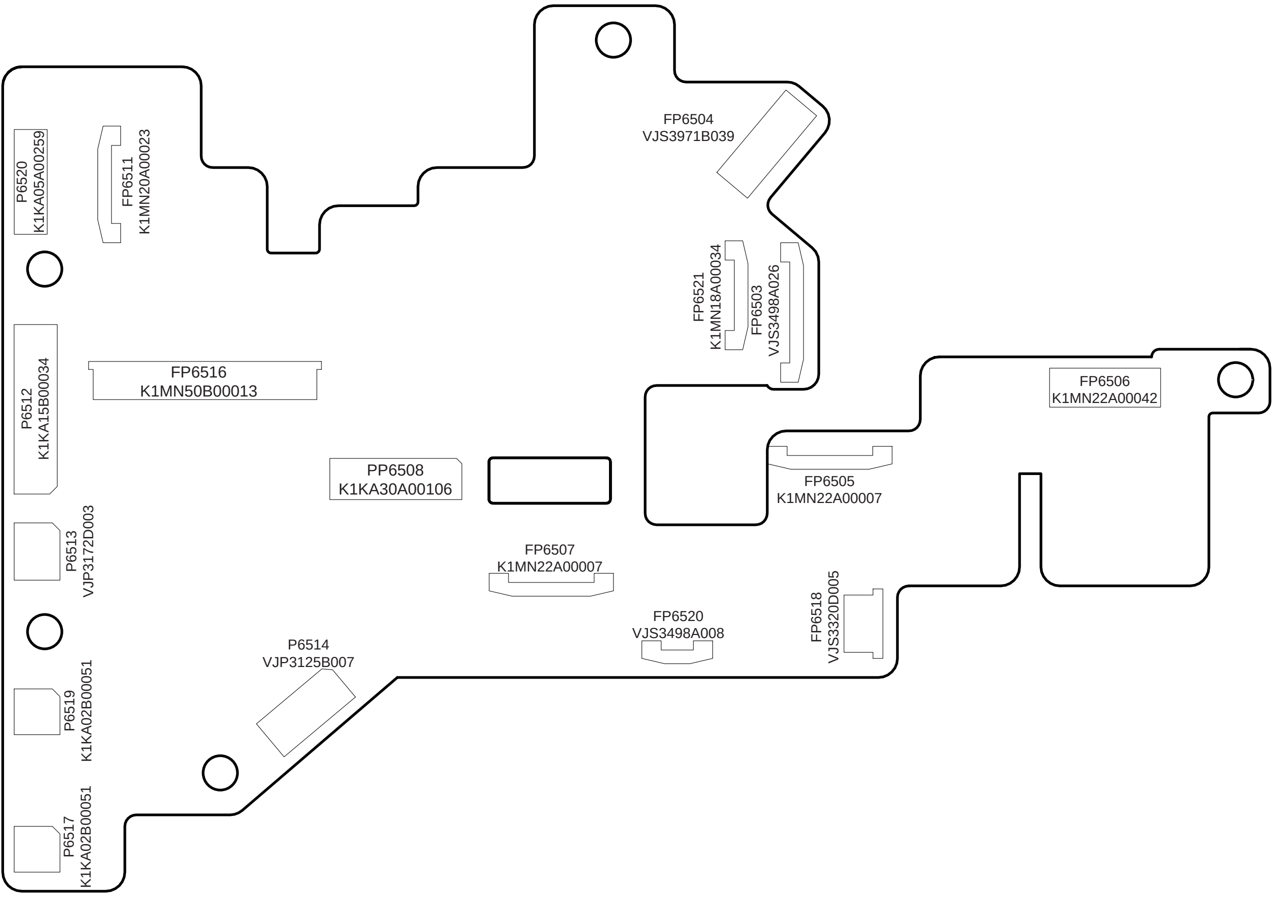
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.(MONITOR:ON)

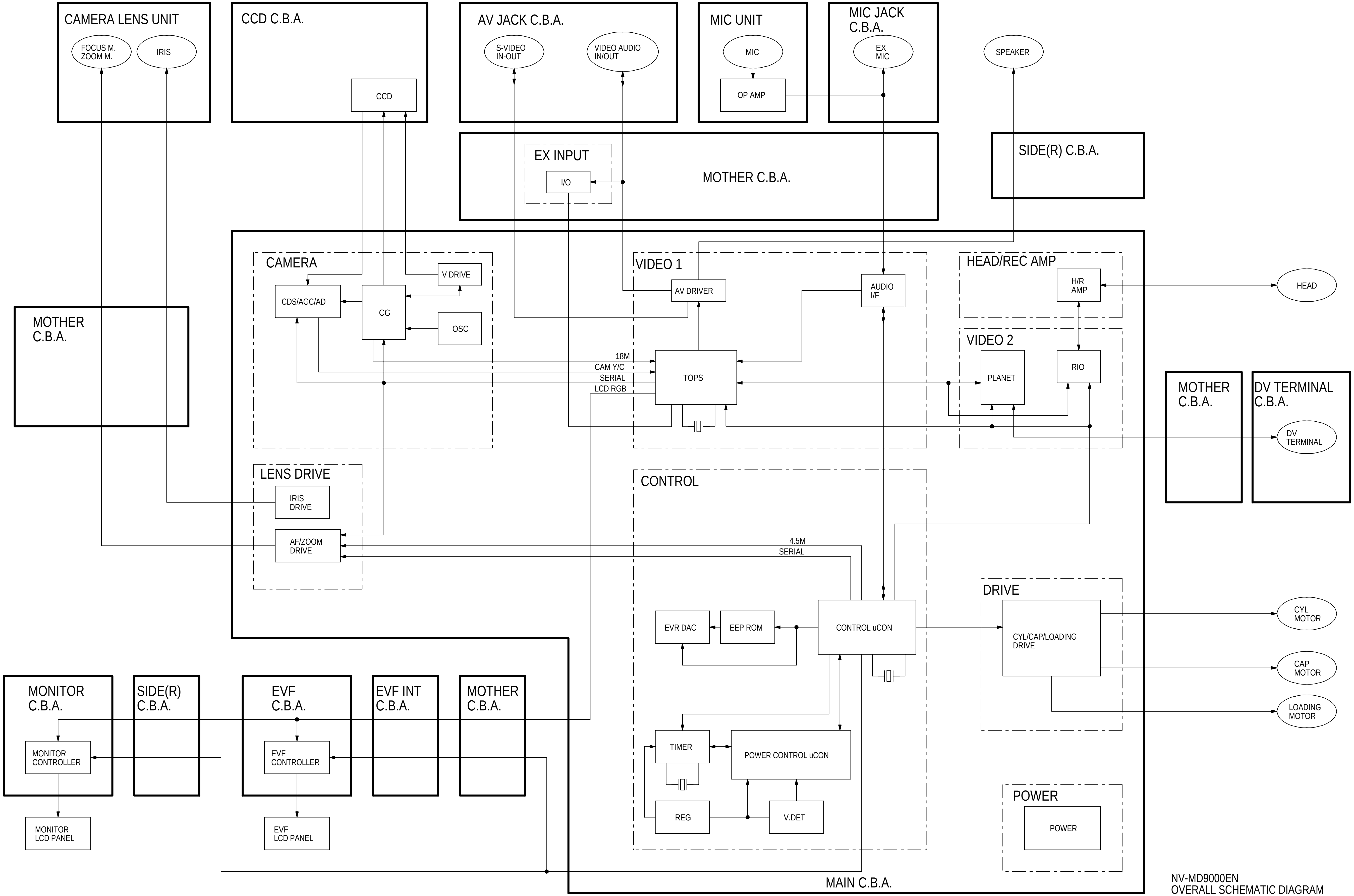
NV-MD9000EN
MONITOR & HALL SENSOR FLEX.CARD
SCHEMATIC DIAGRAM


P6515
K1KA06A00207
FP6509
VJS3498A008
P6510
K1KA05A00259
PP6501
K1KAA0A00092

(COMPONENT SIDE)


FP6504
VJS3971B039
P6520
K1KA05A00259
FP6511
K1MN20A00023
FP6521
K1MN18A00034
FP6503
VJS3498A026
FP6516
K1MN50B00013
P6512
K1KA15B00034
FP6506
K1MN22A00042
PP6508
K1KA30A00106
FP6505
K1MN22A00007
P6513
VJP3172D003
FP6507
K1MN22A00007
FP6520
VJS3498A008
FP6518
VJS3320D005
P6514
VJP3125B007
P6519
K1KA02B00051
P6517
K1KA02B00051

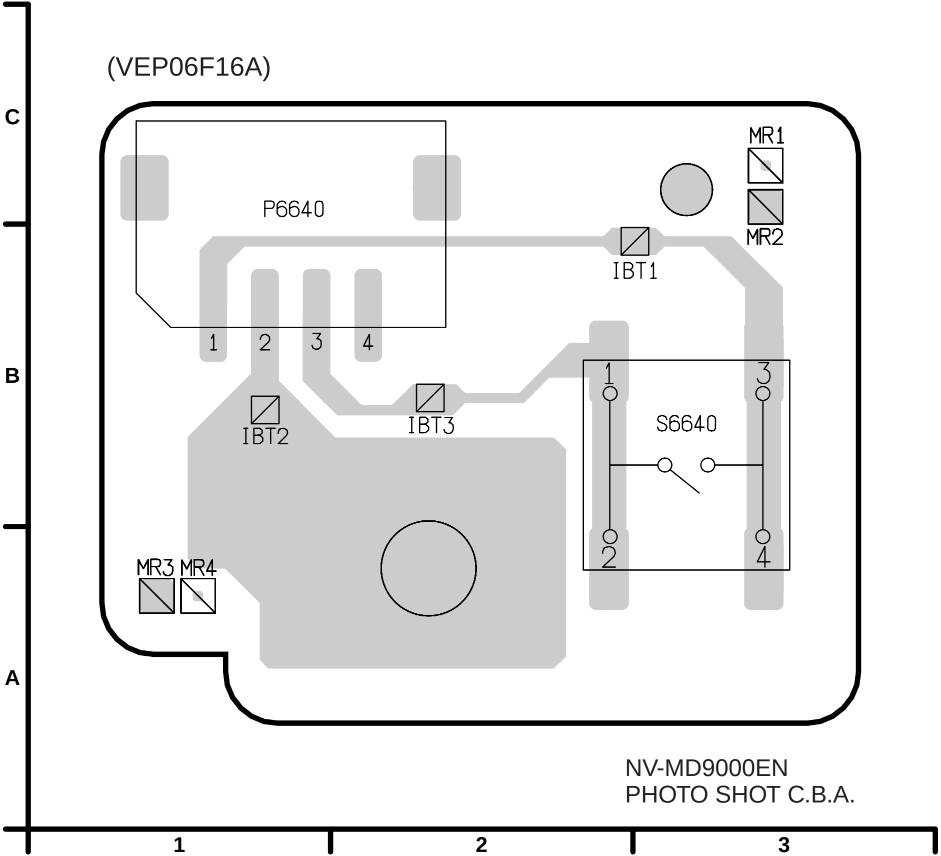
(FOIL SIDE)



CAMERA LENS UNIT
FOCUS M.
ZOOM M.
IRIS
CCD C.B.A.
CCD
AV JACK C.B.A.
S-VIDEO
IN-OUT
VIDEO AUDIO
IN/OUT
MIC UNIT
MIC
OP AMP
MIC JACK
C.B.A.
EX
MIC
SPEAKER
EX INPUT
I/O
MOTHER C.B.A.
SIDE(R) C.B.A.
CAMERA
V DRIVE
CDS/AGC/AD
CG
OSC
18M
CAM Y/C
SERIAL
LCD RGB
VIDEO 1
AV DRIVER
AUDIO
I/F
TOPS
HEAD/REC AMP
H/R
AMP
HEAD
VIDEO 2
PLANET
RIO
MOTHER
C.B.A.
MOTHER
C.B.A.
DV TERMINAL
C.B.A.
DV
TERMINAL
LENS DRIVE
IRIS
DRIVE
AF/ZOOM
DRIVE
CONTROL
4.5M
SERIAL
EVR DAC
EEP ROM
CONTROL uCON
DRIVE
CYL/CAP/LOADING
DRIVE
CYL
MOTOR
CAP
MOTOR
LOADING
MOTOR
TIMER
POWER CONTROL uCON
REG
V.DET
POWER
POWER
MONITOR
C.B.A.
MONITOR
CONTROLLER
MONITOR
LCD PANEL
SIDE(R)
C.B.A.
EVF
C.B.A.
EVF
CONTROLLER
EVF
LCD PANEL
EVF INT
C.B.A.
MOTHER
C.B.A.
MAIN C.B.A.

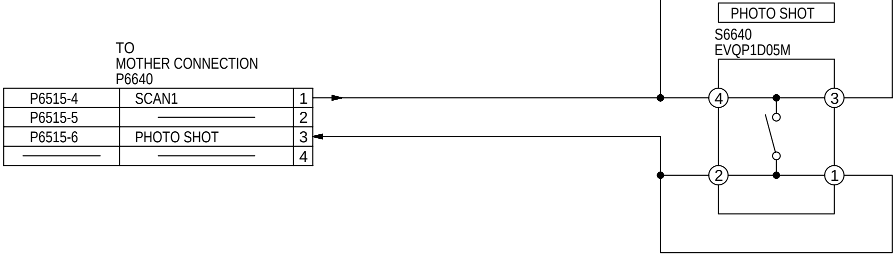
NV-MD9000EN
OVERALL SCHEMATIC DIAGRAM

(VEP06F16A)


C
B
A
1
2
3
P6640
1
2
3
4
MR1
MR2
MR3
MR4
IBT1
IBT2
IBT3
S6640
1
2
3
4

NV-MD9000EN
PHOTO SHOT C.B.A.

(PHOTO SHOT C.B.A.)


TO
MOTHER CONNECTION
P6640
PHOTO SHOT
S6640
EVQP1D05M
4
3
2
1

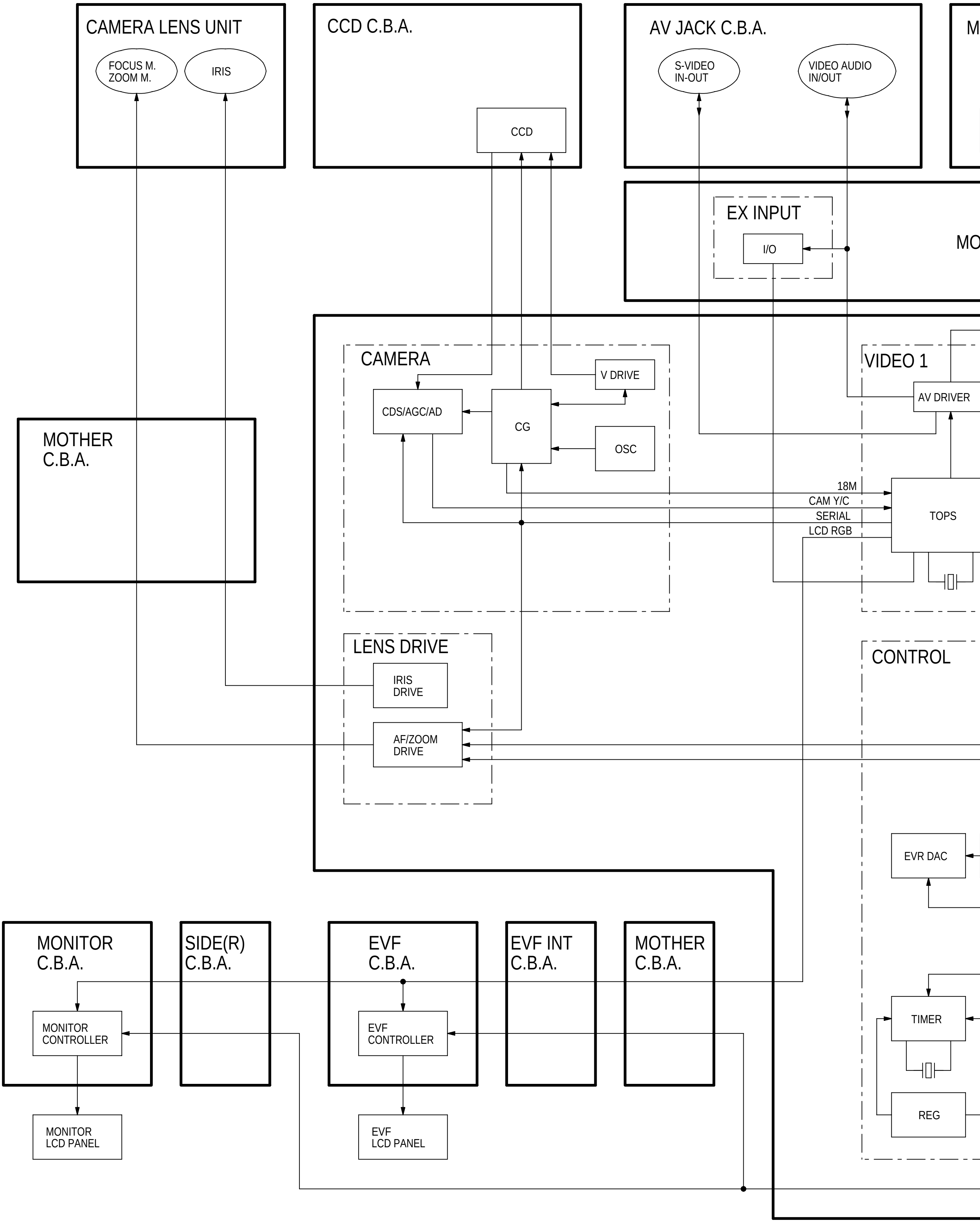
P6515-4	SCAN1	1
P6515-5	———	2
P6515-6	PHOTO SHOT	3
———	———	4

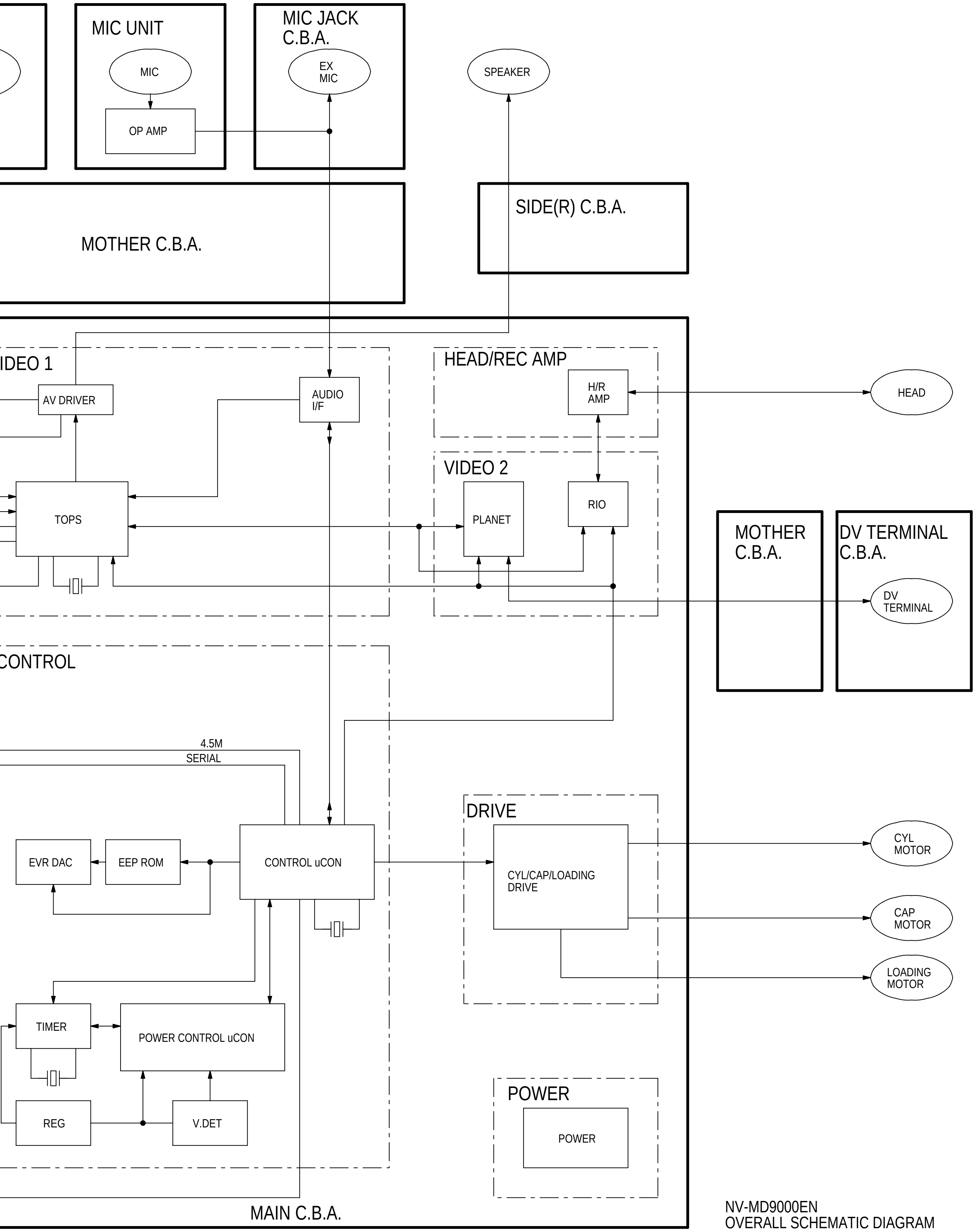
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-MD9000EN
PHOTO SHOT SCHEMATIC DIAGRAM

11 SCHEMATIC DIAGRAMS

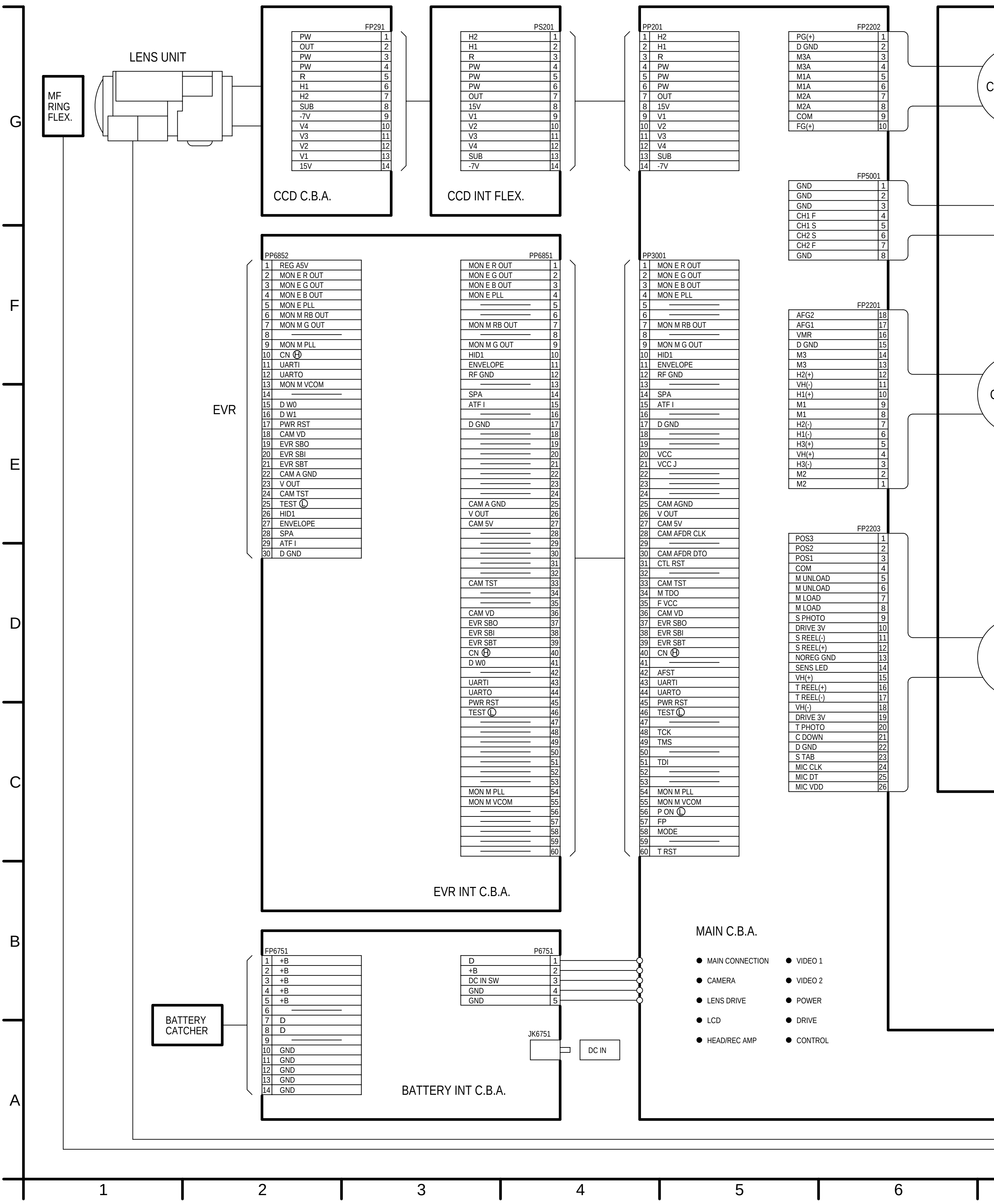
11.1. OVERALL SCHEMATIC DIAGRAM


CAMERA LENS UNIT
FOCUS M.
ZOOM M.
IRIS
CCD C.B.A.
CCD
AV JACK C.B.A.
S-VIDEO
IN-OUT
VIDEO AUDIO
IN/OUT
M
EX INPUT
I/O
MO
CAMERA
V DRIVE
CDS/AGC/AD
CG
OSC
VIDEO 1
AV DRIVER
MOTHER
C.B.A.
18M
CAM Y/C
SERIAL
LCD RGB
TOPS
LENS DRIVE
IRIS
DRIVE
AF/ZOOM
DRIVE
CONTROL
EVR DAC
MONITOR
C.B.A.
SIDE(R)
C.B.A.
EVF
C.B.A.
EVF INT
C.B.A.
MOTHER
C.B.A.
MONITOR
CONTROLLER
EVF
CONTROLLER
TIMER
REG
MONITOR
LCD PANEL
EVF
LCD PANEL


MIC UNIT
MIC
OP AMP
MIC JACK C.B.A.
EX MIC
SPEAKER
MOTHER C.B.A.
SIDE(R) C.B.A.
IDEO 1
AV DRIVER
AUDIO I/F
TOPS
HEAD/REC AMP
H/R AMP
HEAD
VIDEO 2
PLANET
RIO
MOTHER C.B.A.
DV TERMINAL C.B.A.
DV TERMINAL
CONTROL
4.5M
SERIAL
EVR DAC
EEP ROM
CONTROL uCON
DRIVE
CYL/CAP/LOADING DRIVE
CYL MOTOR
CAP MOTOR
LOADING MOTOR
TIMER
POWER CONTROL uCON
REG
V.DET
POWER
POWER
MAIN C.B.A.

NV-MD9000EN
OVERALL SCHEMATIC DIAGRAM

11.2. INTERCONNECTION SCHEMATIC DIAGRAM


LENS UNIT
MF RING FLEX.
CCD C.B.A.
CCD INT FLEX.
EVR
EVR INT C.B.A.
BATTERY CATCHER
BATTERY INT C.B.A.
JK6751
DC IN
MAIN C.B.A.
● MAIN CONNECTION
● CAMERA
● LENS DRIVE
● LCD
● HEAD/REC AMP
● VIDEO 1
● VIDEO 2
● POWER
● DRIVE
● CONTROL
C
C
G
F
E
D
C
B
A
1
2
3
4
5
6

FP291	
PW	1
OUT	2
PW	3
PW	4
R	5
H1	6
H2	7
SUB	8
-7V	9
V4	10
V3	11
V2	12
V1	13
15V	14

PS201	
H2	1
H1	2
R	3
PW	4
PW	5
PW	6
OUT	7
15V	8
V1	9
V2	10
V3	11
V4	12
SUB	13
-7V	14

PP201	
1	H2
2	H1
3	R
4	PW
5	PW
6	PW
7	OUT
8	15V
9	V1
10	V2
11	V3
12	V4
13	SUB
14	-7V

FP2202	
PG(+)	1
D GND	2
M3A	3
M3A	4
M1A	5
M1A	6
M2A	7
M2A	8
COM	9
FG(+)	10

FP5001	
GND	1
GND	2
GND	3
CH1 F	4
CH1 S	5
CH2 S	6
CH2 F	7
GND	8

PP6852	
1	REG A5V
2	MON E R OUT
3	MON E G OUT
4	MON E B OUT
5	MON E PLL
6	MON M RB OUT
7	MON M G OUT
8	—
9	MON M PLL
10	CN Ⓗ
11	UARTI
12	UARTO
13	MON M VCOM
14	—
15	D W0
16	D W1
17	PWR RST
18	CAM VD
19	EVR SBO
20	EVR SBI
21	EVR SBT
22	CAM A GND
23	V OUT
24	CAM TST
25	TEST Ⓛ
26	HID1
27	ENVELOPE
28	SPA
29	ATF I
30	D GND

PP6851	
MON E R OUT	1
MON E G OUT	2
MON E B OUT	3
MON E PLL	4
—	5
—	6
MON M RB OUT	7
—	8
MON M G OUT	9
HID1	10
ENVELOPE	11
RF GND	12
—	13
SPA	14
ATF I	15
—	16
D GND	17
—	18
—	19
—	20
—	21
—	22
—	23
—	24
CAM A GND	25
V OUT	26
CAM 5V	27
—	28
—	29
—	30
—	31
—	32
CAM TST	33
—	34
—	35
CAM VD	36
EVR SBO	37
EVR SBI	38
EVR SBT	39
CN Ⓗ	40
D W0	41
—	42
UARTI	43
UARTO	44
PWR RST	45
TEST Ⓛ	46
—	47
—	48
—	49
—	50
—	51
—	52
—	53
MON M PLL	54
MON M VCOM	55
—	56
—	57
—	58
—	59
—	60

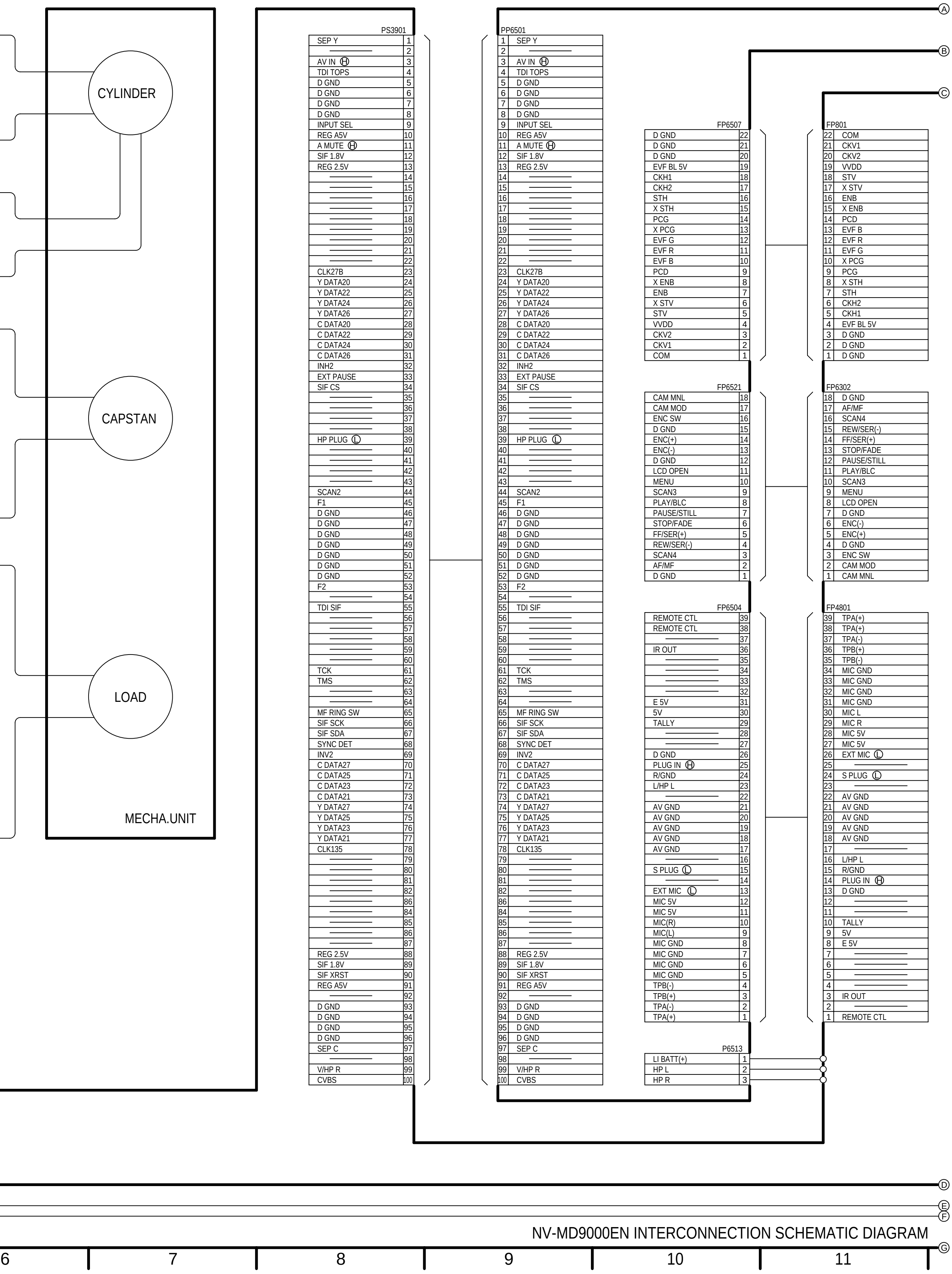
PP3001	
1	MON E R OUT
2	MON E G OUT
3	MON E B OUT
4	MON E PLL
5	—
6	—
7	MON M RB OUT
8	—
9	MON M G OUT
10	HID1
11	ENVELOPE
12	RF GND
13	—
14	SPA
15	ATF I
16	—
17	D GND
18	—
19	—
20	VCC
21	VCC J
22	—
23	—
24	—
25	CAM AGND
26	V OUT
27	CAM 5V
28	CAM AFDR CLK
29	—
30	CAM AFDR DTO
31	CTL RST
32	—
33	CAM TST
34	M TDO
35	F VCC
36	CAM VD
37	EVR SBO
38	EVR SBI
39	EVR SBT
40	CN Ⓗ
41	—
42	AFST
43	UARTI
44	UARTO
45	PWR RST
46	TEST Ⓛ
47	—
48	TCK
49	TMS
50	—
51	TDI
52	—
53	—
54	MON M PLL
55	MON M VCOM
56	P ON Ⓛ
57	FP
58	MODE
59	—
60	T RST

FP2201	
AFG2	18
AFG1	17
VMR	16
D GND	15
M3	14
M3	13
H2(+)	12
VH(-)	11
H1(+)	10
M1	9
M1	8
H2(-)	7
H1(-)	6
H3(+)	5
VH(+)	4
H3(-)	3
M2	2
M2	1

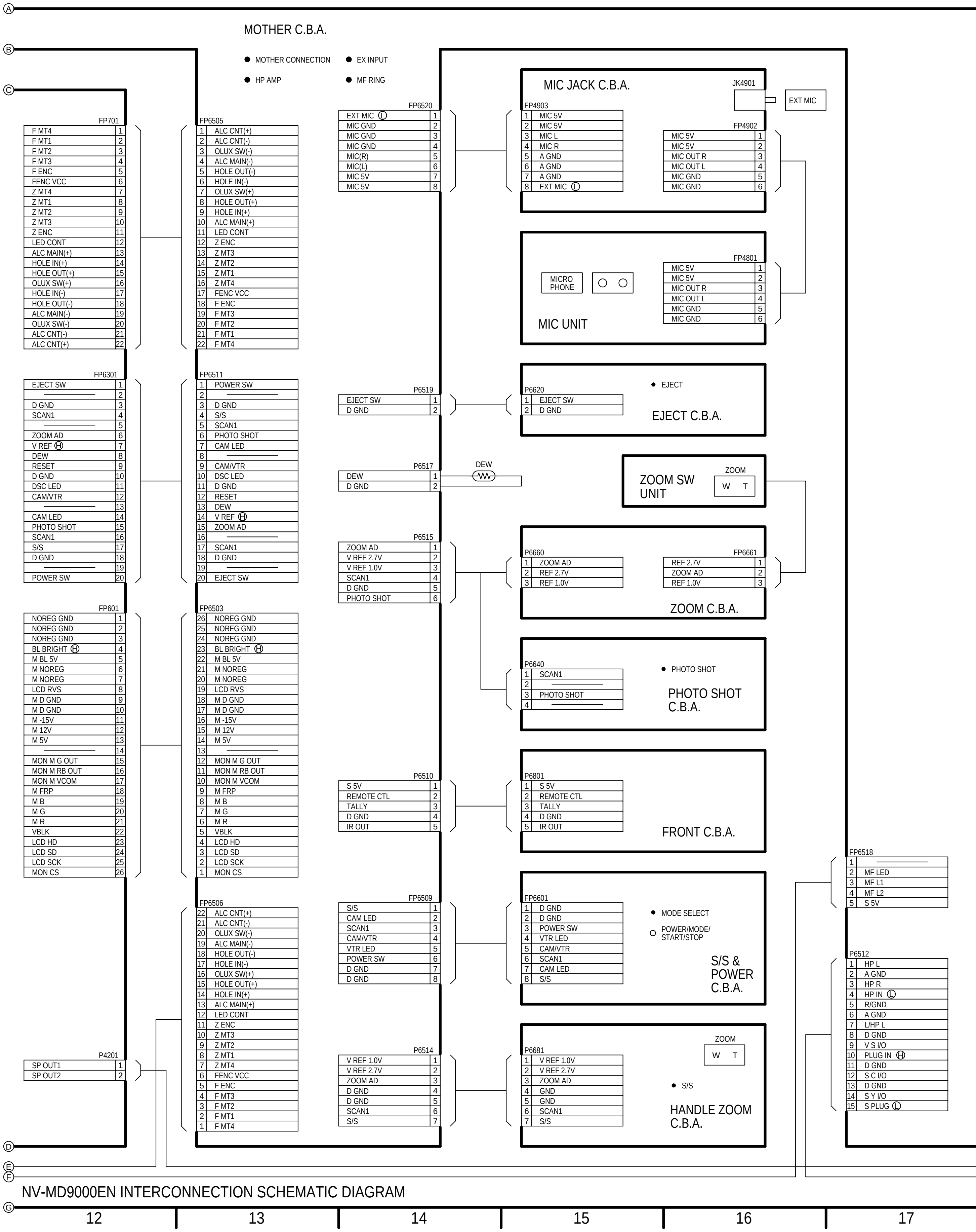
FP2203	
POS3	1
POS2	2
POS1	3
COM	4
M UNLOAD	5
M UNLOAD	6
M LOAD	7
M LOAD	8
S PHOTO	9
DRIVE 3V	10
S REEL(-)	11
S REEL(+)	12
NOREG GND	13
SENS LED	14
VH(+)	15
T REEL(+)	16
T REEL(-)	17
VH(-)	18
DRIVE 3V	19
T PHOTO	20
C DOWN	21
D GND	22
S TAB	23
MIC CLK	24
MIC DT	25
MIC VDD	26

FP6751	
1	+B
2	+B
3	+B
4	+B
5	+B
6	—
7	D
8	D
9	—
10	GND
11	GND
12	GND
13	GND
14	GND

P6751	
D	1
+B	2
DC IN SW	3
GND	4
GND	5

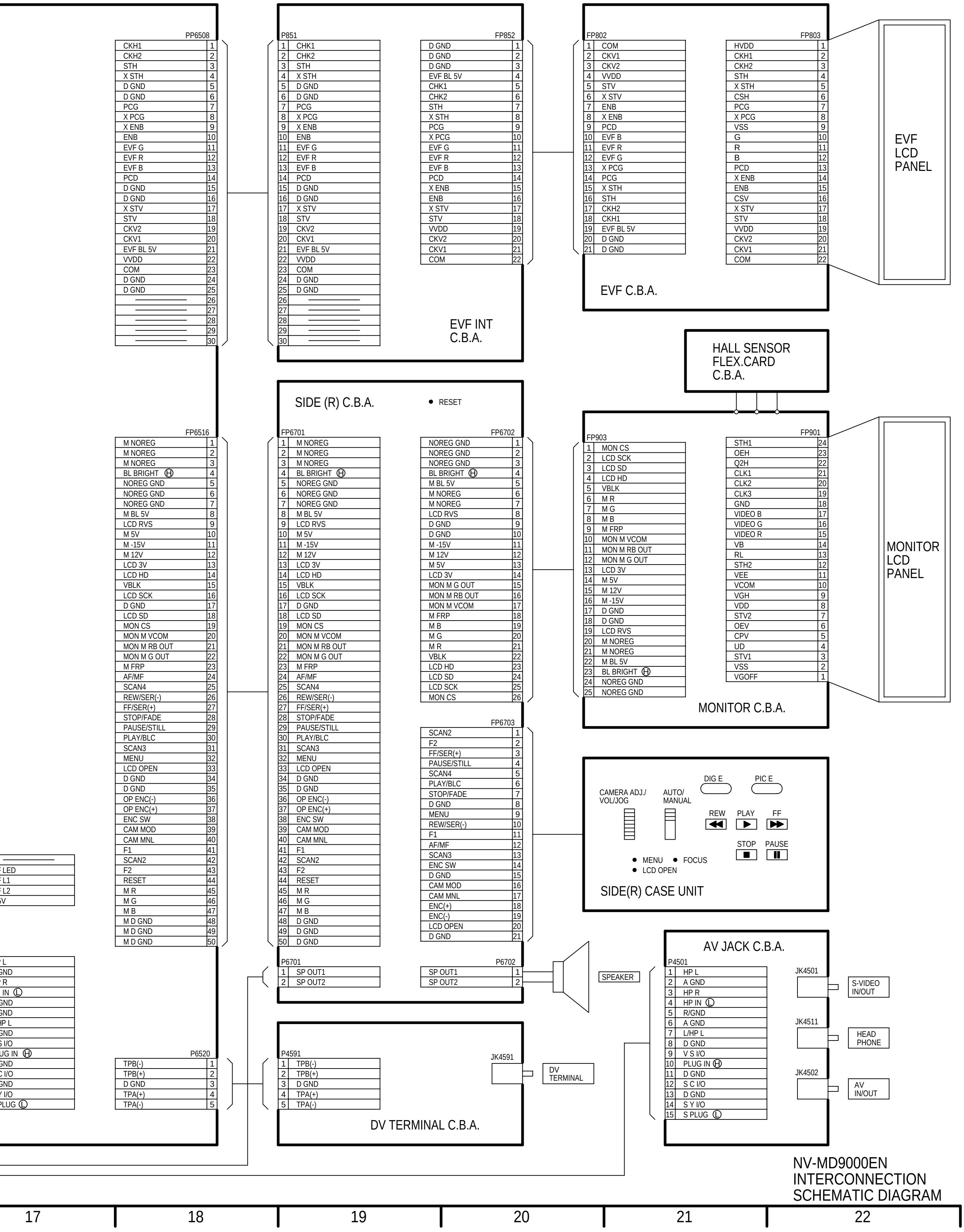

CYLINDER
CAPSTAN
LOAD
MECHA.UNIT
PS3901
1 SEP Y
3 AV IN Ⓗ
4 TDI TOPS
5 D GND
6 D GND
7 D GND
8 D GND
9 INPUT SEL
10 REG A5V
11 A MUTE Ⓗ
12 SIF 1.8V
13 REG 2.5V
23 CLK27B
24 Y DATA20
25 Y DATA22
26 Y DATA24
27 Y DATA26
28 C DATA20
29 C DATA22
30 C DATA24
31 C DATA26
32 INH2
33 EXT PAUSE
34 SIF CS
39 HP PLUG Ⓛ
44 SCAN2
45 F1
46 D GND
47 D GND
48 D GND
49 D GND
50 D GND
51 D GND
52 D GND
53 F2
55 TDI SIF
61 TCK
62 TMS
65 MF RING SW
66 SIF SCK
67 SIF SDA
68 SYNC DET
69 INV2
70 C DATA27
71 C DATA25
72 C DATA23
73 C DATA21
74 Y DATA27
75 Y DATA25
76 Y DATA23
77 Y DATA21
78 CLK135
88 REG 2.5V
89 SIF 1.8V
90 SIF XRST
91 REG A5V
93 D GND
94 D GND
95 D GND
96 D GND
97 SEP C
99 V/HP R
100 CVBS
PP6501
1 SEP Y
3 AV IN Ⓗ
4 TDI TOPS
5 D GND
6 D GND
7 D GND
8 D GND
9 INPUT SEL
10 REG A5V
11 A MUTE Ⓗ
12 SIF 1.8V
13 REG 2.5V
23 CLK27B
24 Y DATA20
25 Y DATA22
26 Y DATA24
27 Y DATA26
28 C DATA20
29 C DATA22
30 C DATA24
31 C DATA26
32 INH2
33 EXT PAUSE
34 SIF CS
39 HP PLUG Ⓛ
44 SCAN2
45 F1
46 D GND
47 D GND
48 D GND
49 D GND
50 D GND
51 D GND
52 D GND
53 F2
55 TDI SIF
61 TCK
62 TMS
65 MF RING SW
66 SIF SCK
67 SIF SDA
68 SYNC DET
69 INV2
70 C DATA27
71 C DATA25
72 C DATA23
73 C DATA21
74 Y DATA27
75 Y DATA25
76 Y DATA23
77 Y DATA21
78 CLK135
88 REG 2.5V
89 SIF 1.8V
90 SIF XRST
91 REG A5V
93 D GND
94 D GND
95 D GND
96 D GND
97 SEP C
99 V/HP R
100 CVBS
FP6507
D GND 22
D GND 21
D GND 20
EVF BL 5V 19
CKH1 18
CKH2 17
STH 16
X STH 15
PCG 14
X PCG 13
EVF G 12
EVF R 11
EVF B 10
PCD 9
X ENB 8
ENB 7
X STV 6
STV 5
VVDD 4
CKV2 3
CKV1 2
COM 1
FP801
22 COM
21 CKV1
20 CKV2
19 VVDD
18 STV
17 X STV
16 ENB
15 X ENB
14 PCD
13 EVF B
12 EVF R
11 EVF G
10 X PCG
9 PCG
8 X STH
7 STH
6 CKH2
5 CKH1
4 EVF BL 5V
3 D GND
2 D GND
1 D GND
FP6521
CAM MNL 18
CAM MOD 17
ENC SW 16
D GND 15
ENC(+) 14
ENC(-) 13
D GND 12
LCD OPEN 11
MENU 10
SCAN3 9
PLAY/BLC 8
PAUSE/STILL 7
STOP/FADE 6
FF/SER(+) 5
REW/SER(-) 4
SCAN4 3
AF/MF 2
D GND 1
FP6302
18 D GND
17 AF/MF
16 SCAN4
15 REW/SER(-)
14 FF/SER(+)
13 STOP/FADE
12 PAUSE/STILL
11 PLAY/BLC
10 SCAN3
9 MENU
8 LCD OPEN
7 D GND
6 ENC(-)
5 ENC(+)
4 D GND
3 ENC SW
2 CAM MOD
1 CAM MNL
FP6504
REMOTE CTL 39
REMOTE CTL 38
IR OUT 36
E 5V 31
5V 30
TALLY 29
D GND 26
PLUG IN Ⓗ 25
R/GND 24
L/HP L 23
AV GND 21
AV GND 20
AV GND 19
AV GND 18
AV GND 17
S PLUG Ⓛ 15
EXT MIC Ⓛ 13
MIC 5V 12
MIC 5V 11
MIC(R) 10
MIC(L) 9
MIC GND 8
MIC GND 7
MIC GND 6
MIC GND 5
TPB(-) 4
TPB(+) 3
TPA(-) 2
TPA(+) 1
FP4801
39 TPA(+)
38 TPA(+)
37 TPA(-)
36 TPB(+)
35 TPB(-)
34 MIC GND
33 MIC GND
32 MIC GND
31 MIC GND
30 MIC L
29 MIC R
28 MIC 5V
27 MIC 5V
26 EXT MIC Ⓛ
24 S PLUG Ⓛ
22 AV GND
21 AV GND
20 AV GND
19 AV GND
18 AV GND
16 L/HP L
15 R/GND
14 PLUG IN Ⓗ
13 D GND
10 TALLY
9 5V
8 E 5V
3 IR OUT
1 REMOTE CTL
P6513
LI BATT(+) 1
HP L 2
HP R 3
Ⓐ
Ⓑ
Ⓒ
Ⓓ
Ⓔ
Ⓕ
Ⓖ
6
7
8
9
10
11

NV-MD9000EN INTERCONNECTION SCHEMATIC DIAGRAM



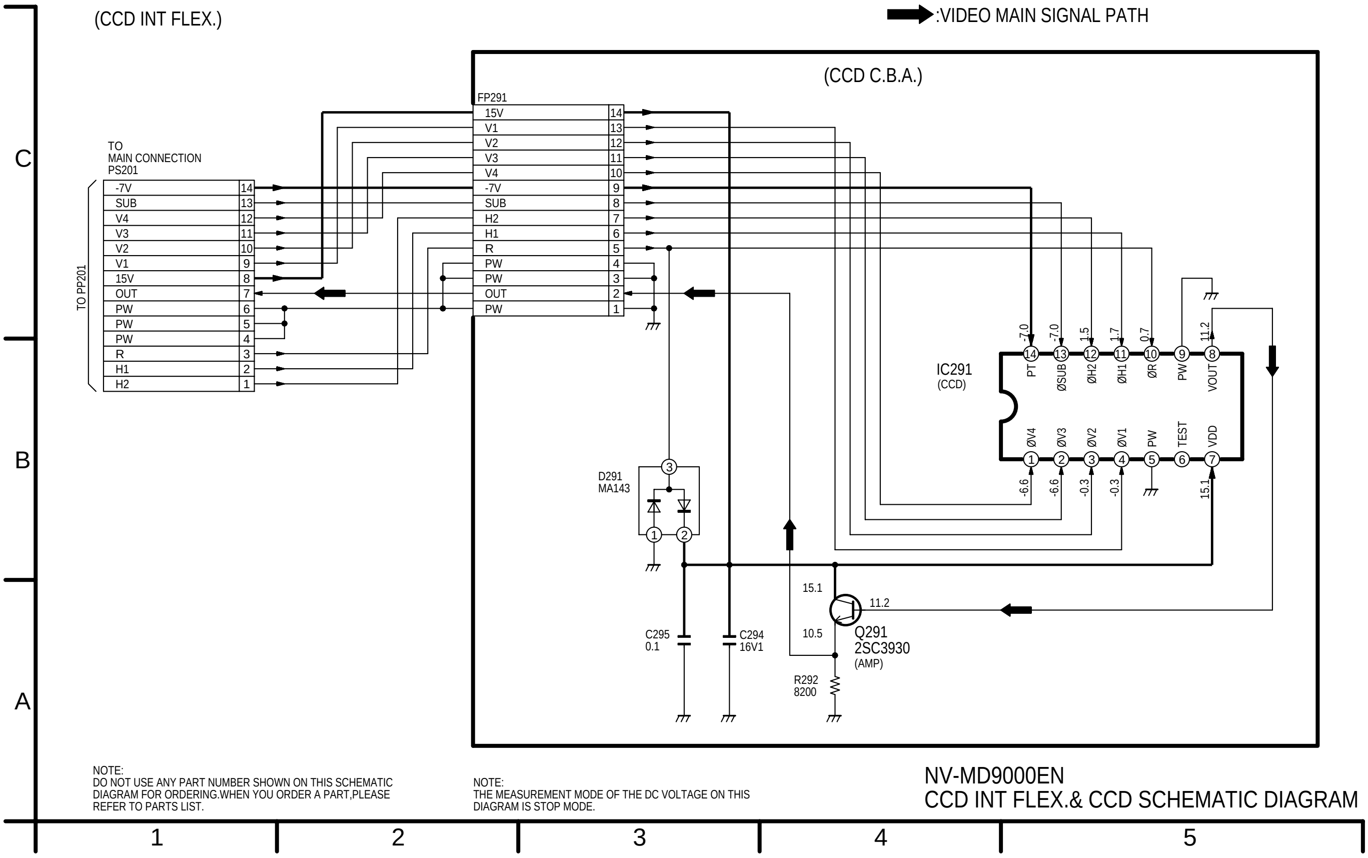
NV-MD9000EN INTERCONNECTION SCHEMATIC DIAGRAM

A
B
C
D
E
F
G
12
13
14
15
16
17
MOTHER C.B.A.
● MOTHER CONNECTION
● EX INPUT
● HP AMP
● MF RING
FP701
F MT4 1
F MT1 2
F MT2 3
F MT3 4
F ENC 5
FENC VCC 6
Z MT4 7
Z MT1 8
Z MT2 9
Z MT3 10
Z ENC 11
LED CONT 12
ALC MAIN(+) 13
HOLE IN(+) 14
HOLE OUT(+) 15
OLUX SW(+) 16
HOLE IN(-) 17
HOLE OUT(-) 18
ALC MAIN(-) 19
OLUX SW(-) 20
ALC CNT(-) 21
ALC CNT(+) 22
FP6505
1 ALC CNT(+)
2 ALC CNT(-)
3 OLUX SW(-)
4 ALC MAIN(-)
5 HOLE OUT(-)
6 HOLE IN(-)
7 OLUX SW(+)
8 HOLE OUT(+)
9 HOLE IN(+)
10 ALC MAIN(+)
11 LED CONT
12 Z ENC
13 Z MT3
14 Z MT2
15 Z MT1
16 Z MT4
17 FENC VCC
18 F ENC
19 F MT3
20 F MT2
21 F MT1
22 F MT4
FP6301
EJECT SW 1
2
D GND 3
SCAN1 4
5
ZOOM AD 6
V REF Ⓗ 7
DEW 8
RESET 9
D GND 10
DSC LED 11
CAM/VTR 12
13
CAM LED 14
PHOTO SHOT 15
SCAN1 16
S/S 17
D GND 18
19
POWER SW 20
FP6511
1 POWER SW
2
3 D GND
4 S/S
5 SCAN1
6 PHOTO SHOT
7 CAM LED
8
9 CAM/VTR
10 DSC LED
11 D GND
12 RESET
13 DEW
14 V REF Ⓗ
15 ZOOM AD
16
17 SCAN1
18 D GND
19
20 EJECT SW
FP601
NOREG GND 1
NOREG GND 2
NOREG GND 3
BL BRIGHT Ⓗ 4
M BL 5V 5
M NOREG 6
M NOREG 7
LCD RVS 8
M D GND 9
M D GND 10
M -15V 11
M 12V 12
M 5V 13
14
MON M G OUT 15
MON M RB OUT 16
MON M VCOM 17
M FRP 18
M B 19
M G 20
M R 21
VBLK 22
LCD HD 23
LCD SD 24
LCD SCK 25
MON CS 26
FP6503
26 NOREG GND
25 NOREG GND
24 NOREG GND
23 BL BRIGHT Ⓗ
22 M BL 5V
21 M NOREG
20 M NOREG
19 LCD RVS
18 M D GND
17 M D GND
16 M -15V
15 M 12V
14 M 5V
13
12 MON M G OUT
11 MON M RB OUT
10 MON M VCOM
9 M FRP
8 M B
7 M G
6 M R
5 VBLK
4 LCD HD
3 LCD SD
2 LCD SCK
1 MON CS
P4201
SP OUT1 1
SP OUT2 2
FP6506
22 ALC CNT(+)
21 ALC CNT(-)
20 OLUX SW(-)
19 ALC MAIN(-)
18 HOLE OUT(-)
17 HOLE IN(-)
16 OLUX SW(+)
15 HOLE OUT(+)
14 HOLE IN(+)
13 ALC MAIN(+)
12 LED CONT
11 Z ENC
10 Z MT3
9 Z MT2
8 Z MT1
7 Z MT4
6 FENC VCC
5 F ENC
4 F MT3
3 F MT2
2 F MT1
1 F MT4
FP6520
EXT MIC Ⓛ 1
MIC GND 2
MIC GND 3
MIC GND 4
MIC(R) 5
MIC(L) 6
MIC 5V 7
MIC 5V 8
P6519
EJECT SW 1
D GND 2
P6517
DEW 1
D GND 2
DEW
P6515
ZOOM AD 1
V REF 2.7V 2
V REF 1.0V 3
SCAN1 4
D GND 5
PHOTO SHOT 6
P6510
S 5V 1
REMOTE CTL 2
TALLY 3
D GND 4
IR OUT 5
FP6509
S/S 1
CAM LED 2
SCAN1 3
CAM/VTR 4
VTR LED 5
POWER SW 6
D GND 7
D GND 8
P6514
V REF 1.0V 1
V REF 2.7V 2
ZOOM AD 3
D GND 4
D GND 5
SCAN1 6
S/S 7
MIC JACK C.B.A.
JK4901
EXT MIC
FP4903
1 MIC 5V
2 MIC 5V
3 MIC L
4 MIC R
5 A GND
6 A GND
7 A GND
8 EXT MIC Ⓛ
FP4902
MIC 5V 1
MIC 5V 2
MIC OUT R 3
MIC OUT L 4
MIC GND 5
MIC GND 6
MICRO PHONE
MIC UNIT
FP4801
MIC 5V 1
MIC 5V 2
MIC OUT R 3
MIC OUT L 4
MIC GND 5
MIC GND 6
P6620
1 EJECT SW
2 D GND
● EJECT
EJECT C.B.A.
ZOOM SW UNIT
ZOOM
W T
P6660
1 ZOOM AD
2 REF 2.7V
3 REF 1.0V
FP6661
REF 2.7V 1
ZOOM AD 2
REF 1.0V 3
ZOOM C.B.A.
P6640
1 SCAN1
2
3 PHOTO SHOT
4
● PHOTO SHOT
PHOTO SHOT C.B.A.
P6801
1 S 5V
2 REMOTE CTL
3 TALLY
4 D GND
5 IR OUT
FRONT C.B.A.
FP6601
1 D GND
2 D GND
3 POWER SW
4 VTR LED
5 CAM/VTR
6 SCAN1
7 CAM LED
8 S/S
● MODE SELECT
○ POWER/MODE/ START/STOP
S/S & POWER C.B.A.
P6681
1 V REF 1.0V
2 V REF 2.7V
3 ZOOM AD
4 GND
5 GND
6 SCAN1
7 S/S
ZOOM
W T
● S/S
HANDLE ZOOM C.B.A.
FP6518
1
2 MF LED
3 MF L1
4 MF L2
5 S 5V
P6512
1 HP L
2 A GND
3 HP R
4 HP IN Ⓛ
5 R/GND
6 A GND
7 L/HP L
8 D GND
9 V S I/O
10 PLUG IN Ⓗ
11 D GND
12 S C I/O
13 D GND
14 S Y I/O
15 S PLUG Ⓛ

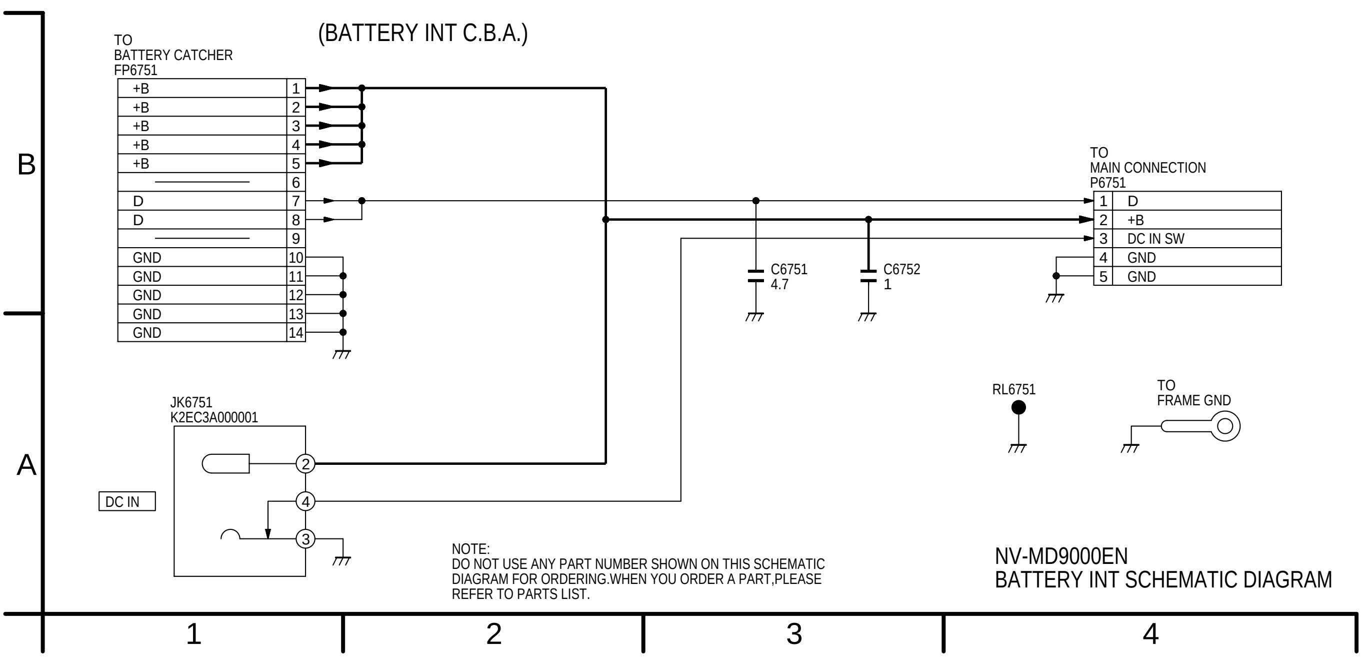

PP6508
P851
FP852
FP802
FP803
EVF INT C.B.A.
EVF C.B.A.
EVF LCD PANEL
HALL SENSOR FLEX.CARD C.B.A.
SIDE (R) C.B.A.
RESET
FP6516
FP6701
FP6702
FP6703
FP903
FP901
MONITOR C.B.A.
MONITOR LCD PANEL
CAMERA ADJ./ VOL/JOG
AUTO/ MANUAL
DIG E
PIC E
REW
PLAY
FF
STOP
PAUSE
MENU
FOCUS
LCD OPEN
SIDE(R) CASE UNIT
P6701
P6702
SP OUT1
SP OUT2
SPEAKER
AV JACK C.B.A.
P4501
JK4501
S-VIDEO IN/OUT
JK4511
HEAD PHONE
JK4502
AV IN/OUT
P6520
P4591
JK4591
DV TERMINAL
DV TERMINAL C.B.A.
17
18
19
20
21
22

NV-MD9000EN
INTERCONNECTION
SCHEMATIC DIAGRAM

11.3. CCD INT FLEX. & CCD SCHEMATIC DIAGRAM


(CCD INT FLEX.)
:VIDEO MAIN SIGNAL PATH
(CCD C.B.A.)
TO MAIN CONNECTION PS201
TO PP201
-7V 14
SUB 13
V4 12
V3 11
V2 10
V1 9
15V 8
OUT 7
PW 6
PW 5
PW 4
R 3
H1 2
H2 1
FP291
15V 14
V1 13
V2 12
V3 11
V4 10
-7V 9
SUB 8
H2 7
H1 6
R 5
PW 4
PW 3
OUT 2
PW 1
IC291
(CCD)
PT ØSUB ØH2 ØH1 ØR PW VOUT
ØV4 ØV3 ØV2 ØV1 PW TEST VDD
-7.0 -7.0 1.5 1.7 0.7 11.2
-6.6 -6.6 -0.3 -0.3 15.1
D291
MA143
15.1
11.2
10.5
Q291
2SC3930
(AMP)
C295
0.1
C294
16V1
R292
8200
C
B
A
1 2 3 4 5
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.
NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.
NV-MD9000EN
CCD INT FLEX.& CCD SCHEMATIC DIAGRAM

11.4. BATTERY INT SCHEMATIC DIAGRAM

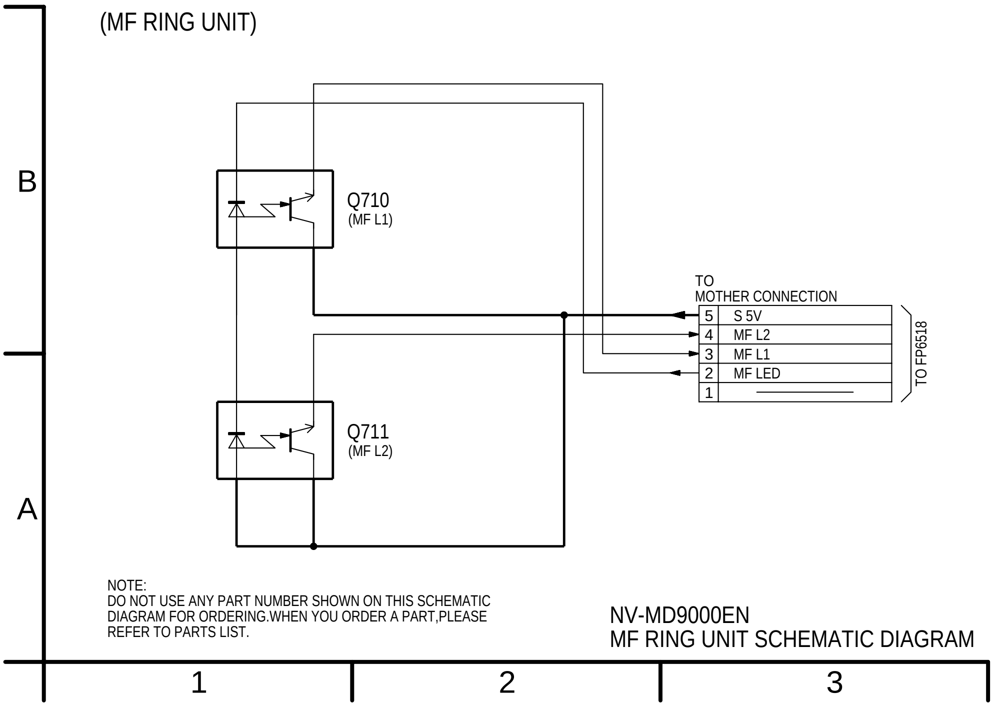

(BATTERY INT C.B.A.)
TO BATTERY CATCHER FP6751
+B 1
+B 2
+B 3
+B 4
+B 5
6
D 7
D 8
9
GND 10
GND 11
GND 12
GND 13
GND 14
TO MAIN CONNECTION P6751
1 D
2 +B
3 DC IN SW
4 GND
5 GND
C6751
4.7
C6752
1
JK6751
K2EC3A000001
DC IN
RL6751
TO FRAME GND
B
A
1 2 3 4
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.
NV-MD9000EN
BATTERY INT SCHEMATIC DIAGRAM

11.5.

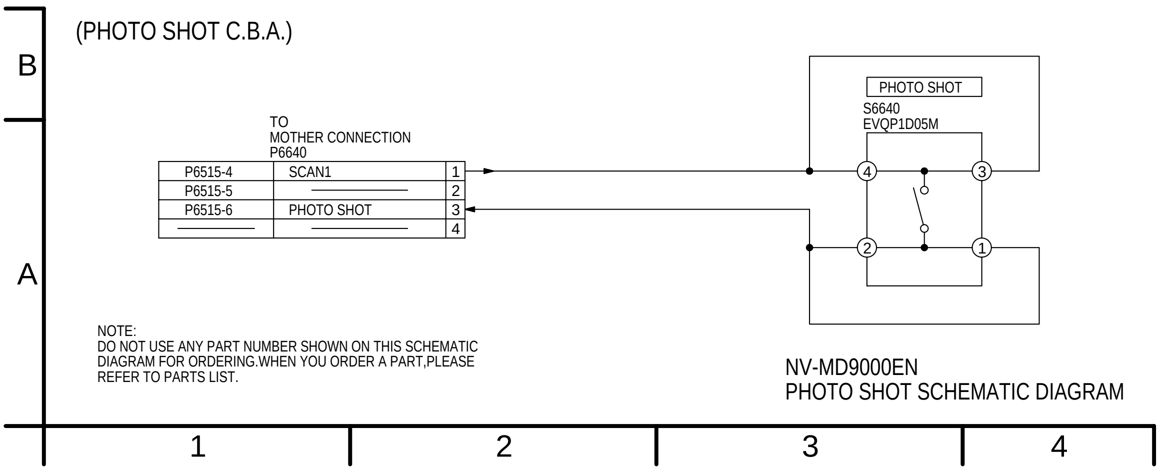
11.6.

11.7.

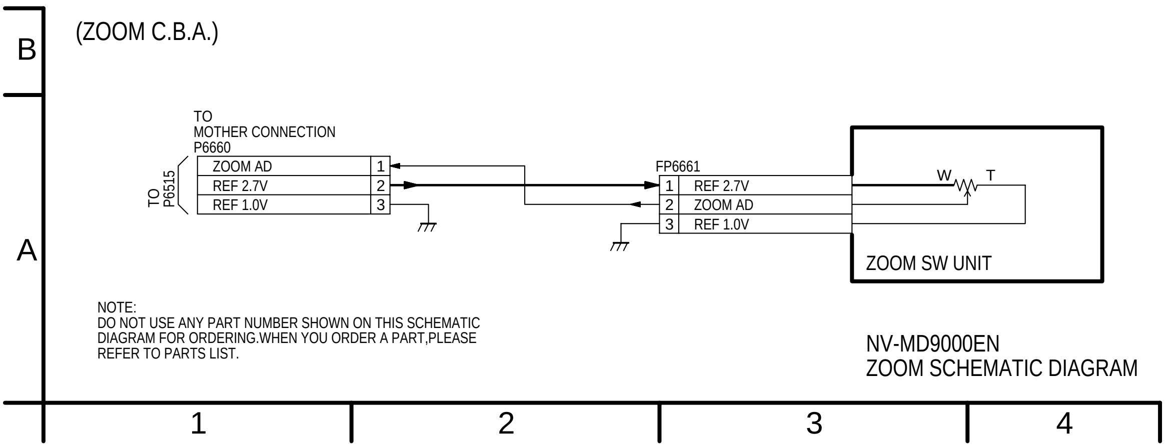
11.5. MF RING UNIT SCHEMATIC DIAGRAM


(MF RING UNIT)
B
A
Q710
(MF L1)
Q711
(MF L2)
TO
MOTHER CONNECTION
5 S 5V
4 MF L2
3 MF L1
2 MF LED
1
TO FP6518
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.
NV-MD9000EN
MF RING UNIT SCHEMATIC DIAGRAM
1
2
3

11.6. PHOTO SHOT SCHEMATIC DIAGRAM

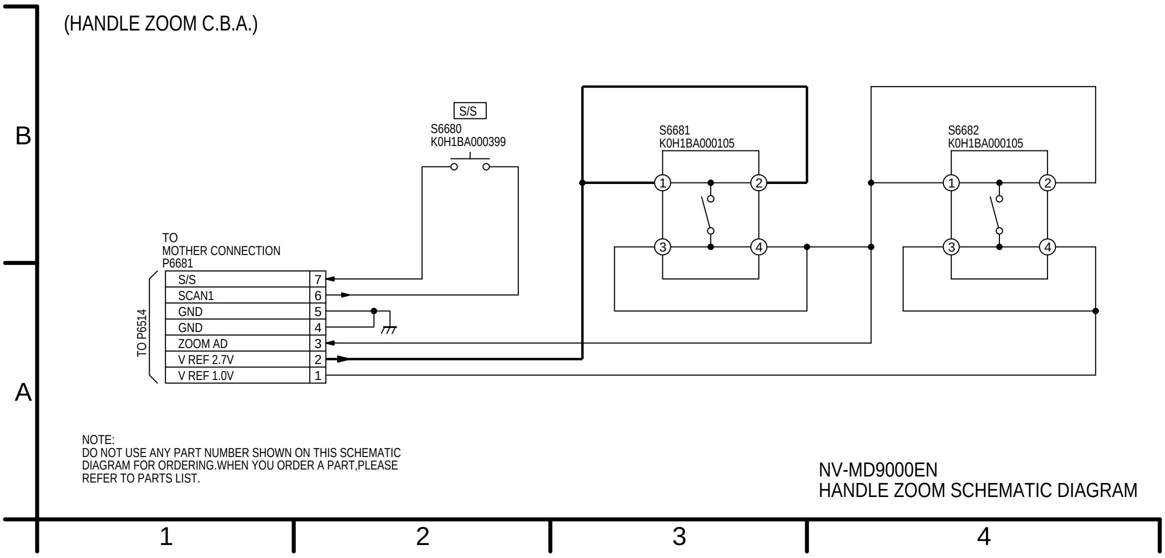

(PHOTO SHOT C.B.A.)
B
A
TO
MOTHER CONNECTION
P6640
P6515-4 SCAN1 1
P6515-5 2
P6515-6 PHOTO SHOT 3
4
PHOTO SHOT
S6640
EVQP1D05M
4
3
2
1
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.
NV-MD9000EN
PHOTO SHOT SCHEMATIC DIAGRAM
1
2
3
4

11.7. ZOOM SCHEMATIC DIAGRAM


(ZOOM C.B.A.)
B
A
TO
MOTHER CONNECTION
P6660
TO P6515
ZOOM AD 1
REF 2.7V 2
REF 1.0V 3
FP6661
1 REF 2.7V
2 ZOOM AD
3 REF 1.0V
W
T
ZOOM SW UNIT
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.
NV-MD9000EN
ZOOM SCHEMATIC DIAGRAM
1
2
3
4

11.8. HANDLE ZOOM SCHEMATIC DIAGRAM

(HANDLE ZOOM C.B.A.)

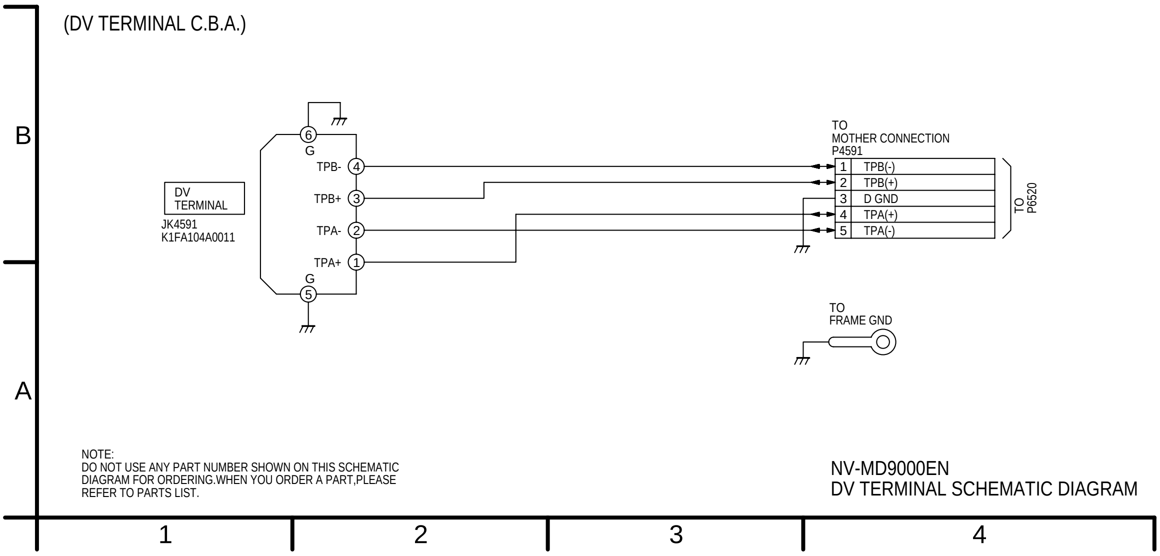

S/S
S6680
K0H1BA000399
S6681
K0H1BA000105
S6682
K0H1BA000105
TO
MOTHER CONNECTION
P6681
TO P6514
S/S 7
SCAN1 6
GND 5
GND 4
ZOOM AD 3
V REF 2.7V 2
V REF 1.0V 1
B
A
1
2
3
4

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-MD9000EN
HANDLE ZOOM SCHEMATIC DIAGRAM

11.9. DV TERMINAL SCHEMATIC DIAGRAM

(DV TERMINAL C.B.A.)

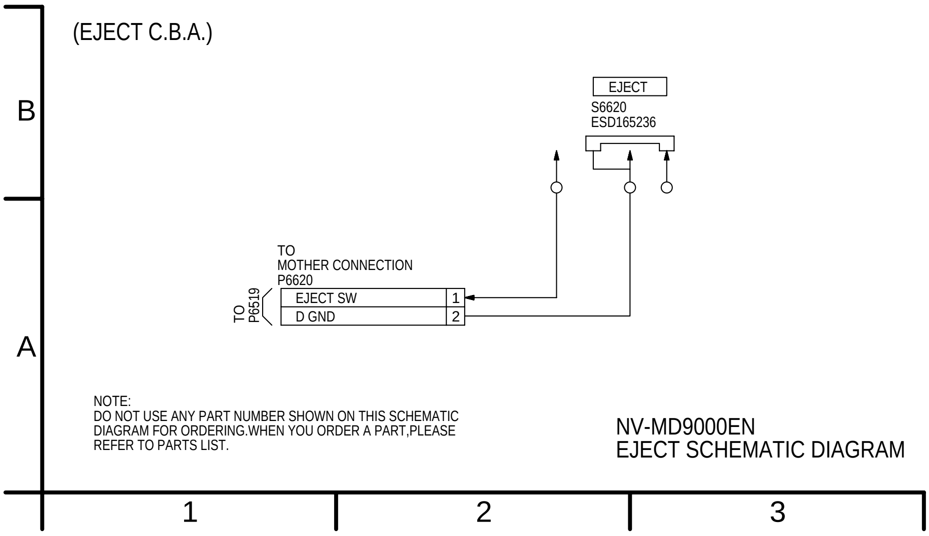

DV
TERMINAL
JK4591
K1FA104A0011
G
TPB- 4
TPB+ 3
TPA- 2
TPA+ 1
G
TO
MOTHER CONNECTION
P4591
1 TPB(-)
2 TPB(+)
3 D GND
4 TPA(+)
5 TPA(-)
TO P6520
TO
FRAME GND
B
A
1
2
3
4

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-MD9000EN
DV TERMINAL SCHEMATIC DIAGRAM

11.10. EJECT SCHEMATIC DIAGRAM

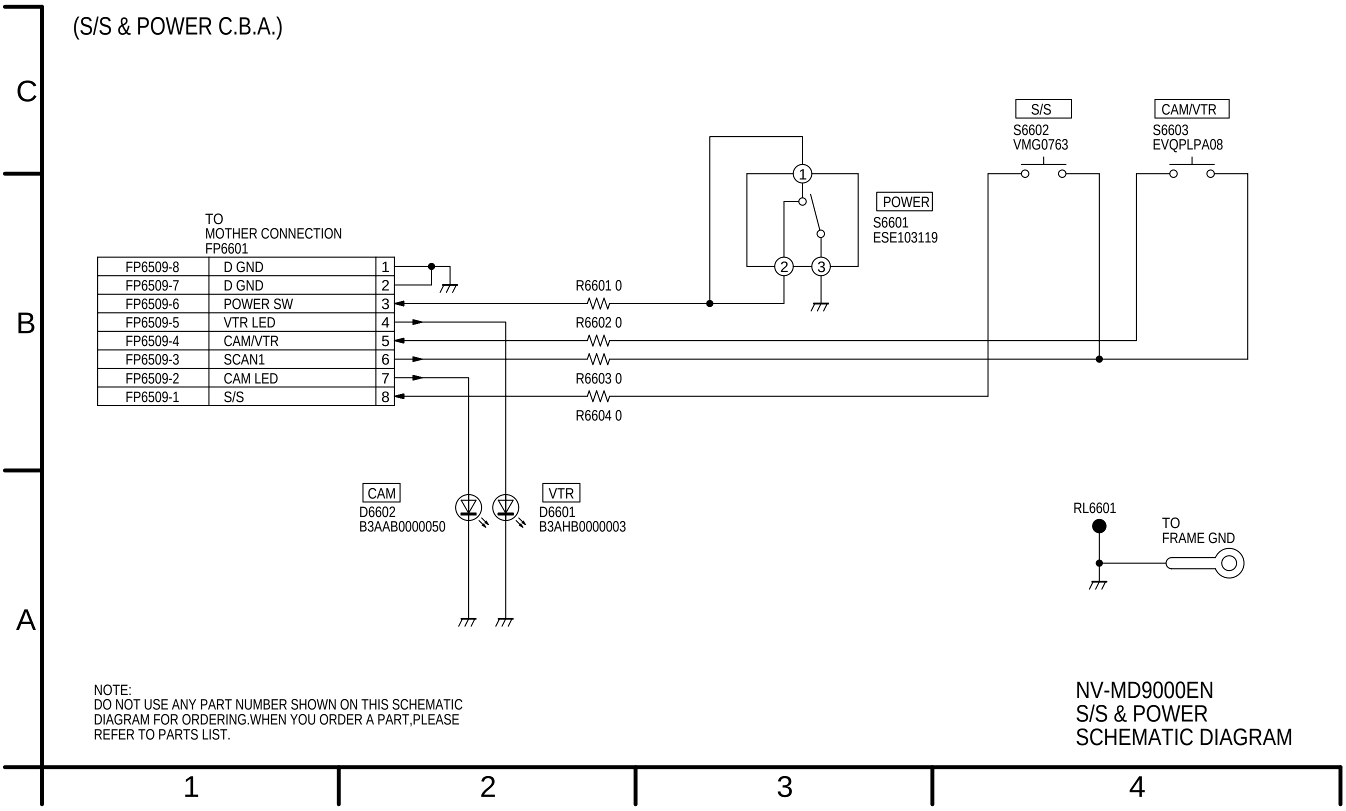
(EJECT C.B.A.)


EJECT
S6620
ESD165236
TO
MOTHER CONNECTION
P6620
TO P6519
EJECT SW 1
D GND 2
B
A
1
2
3

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-MD9000EN
EJECT SCHEMATIC DIAGRAM

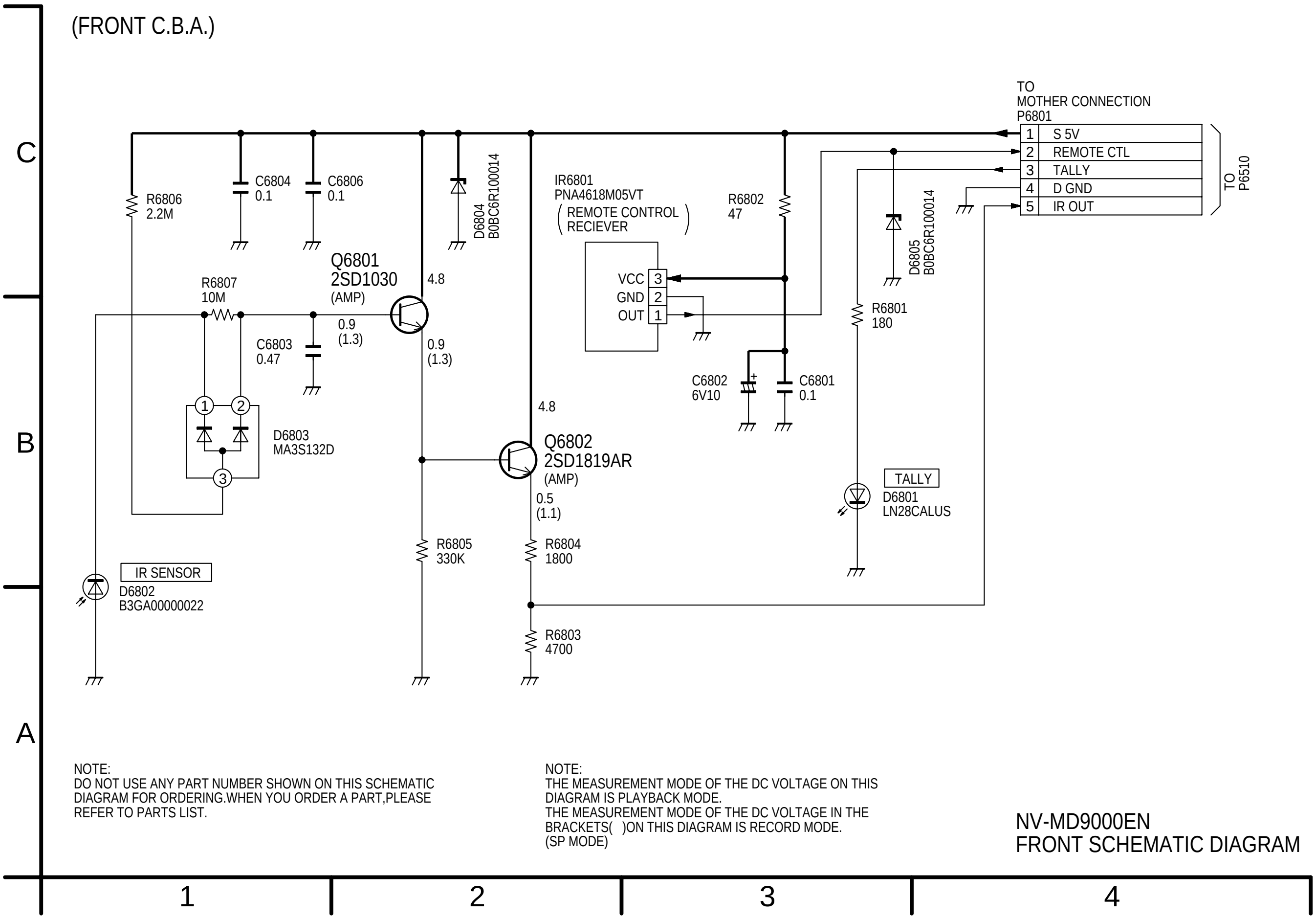
11.11. S/S & POWER SCHEMATIC DIAGRAM


(S/S & POWER C.B.A.)
C
B
A
1
2
3
4
TO
MOTHER CONNECTION
FP6601
FP6509-8 D GND 1
FP6509-7 D GND 2
FP6509-6 POWER SW 3
FP6509-5 VTR LED 4
FP6509-4 CAM/VTR 5
FP6509-3 SCAN1 6
FP6509-2 CAM LED 7
FP6509-1 S/S 8
R6601 0
R6602 0
R6603 0
R6604 0
POWER
S6601
ESE103119
S/S
S6602
VMG0763
CAM/VTR
S6603
EVQPLPA08
CAM
D6602
B3AAB0000050
VTR
D6601
B3AHB0000003
RL6601
TO
FRAME GND

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC
DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE
REFER TO PARTS LIST.

NV-MD9000EN
S/S & POWER
SCHEMATIC DIAGRAM

11.12. FRONT SCHEMATIC DIAGRAM

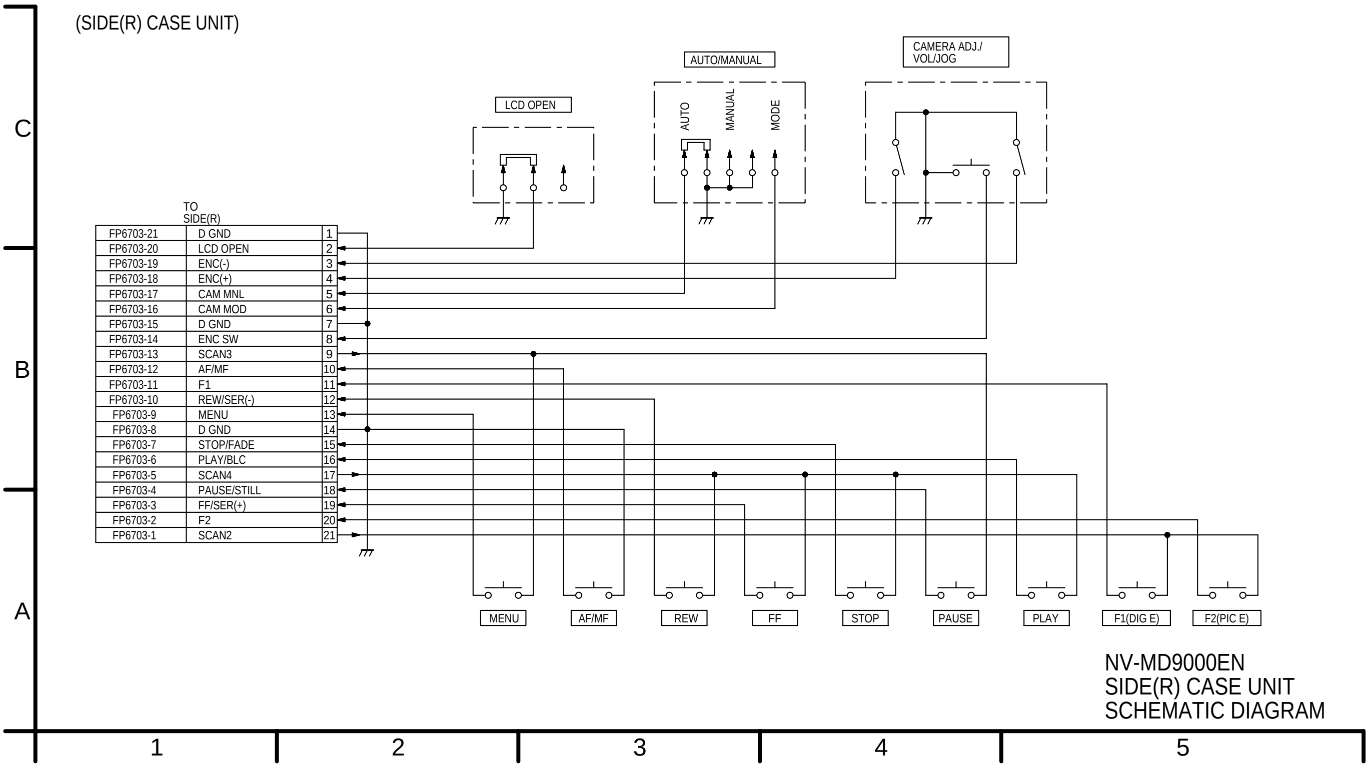

(FRONT C.B.A.)
C
B
A
1
2
3
4
TO
MOTHER CONNECTION
P6801
1 S 5V
2 REMOTE CTL
3 TALLY
4 D GND
5 IR OUT
TO
P6510
R6806
2.2M
C6804
0.1
C6806
0.1
D6804
B0BC6R100014
IR6801
PNA4618M05VT
(REMOTE CONTROL RECIEVER)
R6802
47
D6805
B0BC6R100014
Q6801
2SD1030
(AMP)
4.8
R6807
10M
0.9
(1.3)
C6803
0.47
0.9
(1.3)
VCC 3
GND 2
OUT 1
R6801
180
C6802
6V10
C6801
0.1
4.8
D6803
MA3S132D
Q6802
2SD1819AR
(AMP)
0.5
(1.1)
TALLY
D6801
LN28CALUS
R6805
330K
R6804
1800
IR SENSOR
D6802
B3GA00000022
R6803
4700

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC
DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE
REFER TO PARTS LIST.

NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS
DIAGRAM IS PLAYBACK MODE.
THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE
BRACKETS( )ON THIS DIAGRAM IS RECORD MODE.
(SP MODE)

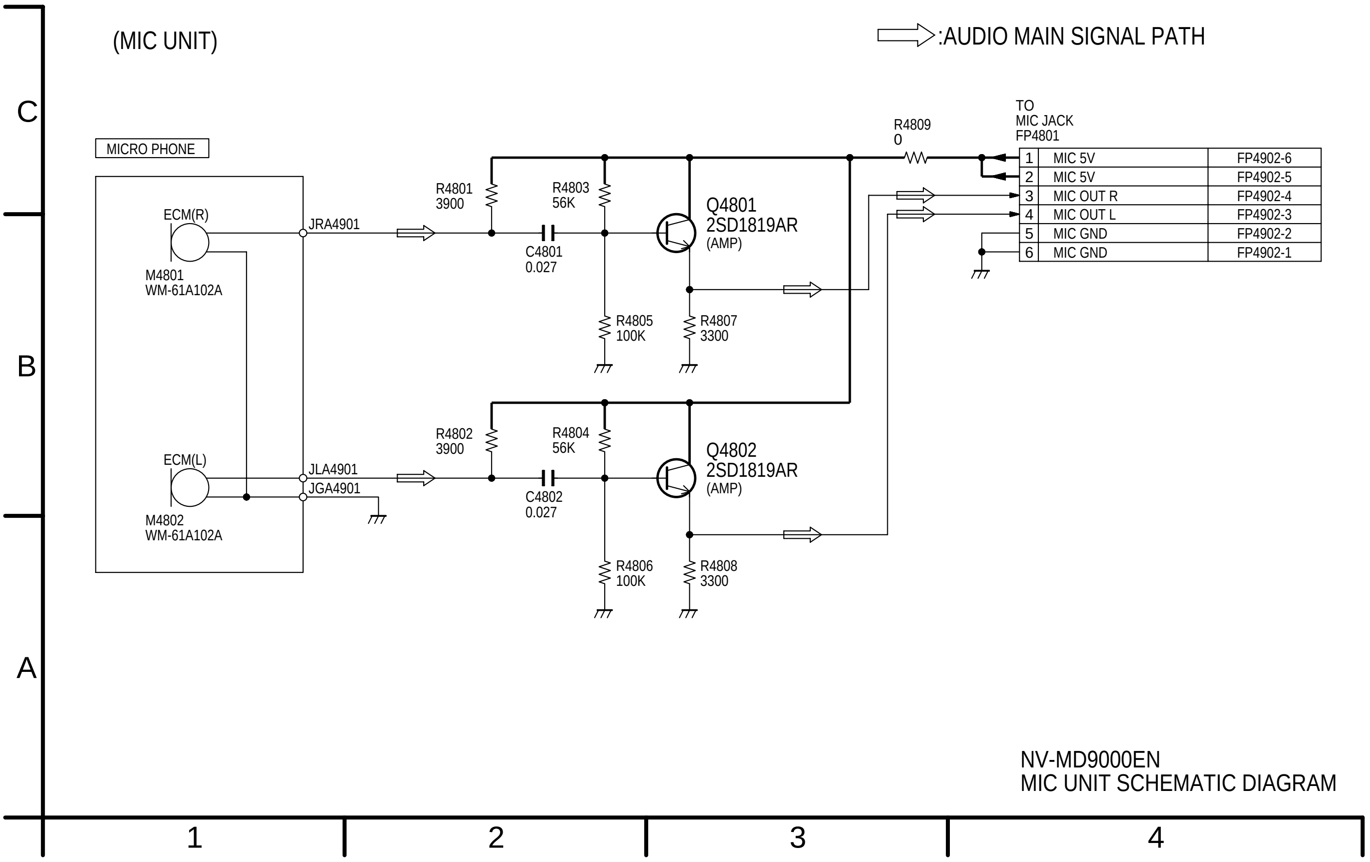
NV-MD9000EN
FRONT SCHEMATIC DIAGRAM

11.13. SIDE (R) CASE UNIT SCHEMATIC DIAGRAM



(SIDE(R) CASE UNIT)
LCD OPEN
AUTO/MANUAL
AUTO
MANUAL
MODE
CAMERA ADJ./
VOL/JOG
TO
SIDE(R)
FP6703-21 D GND 1
FP6703-20 LCD OPEN 2
FP6703-19 ENC(-) 3
FP6703-18 ENC(+) 4
FP6703-17 CAM MNL 5
FP6703-16 CAM MOD 6
FP6703-15 D GND 7
FP6703-14 ENC SW 8
FP6703-13 SCAN3 9
FP6703-12 AF/MF 10
FP6703-11 F1 11
FP6703-10 REW/SER(-) 12
FP6703-9 MENU 13
FP6703-8 D GND 14
FP6703-7 STOP/FADE 15
FP6703-6 PLAY/BLC 16
FP6703-5 SCAN4 17
FP6703-4 PAUSE/STILL 18
FP6703-3 FF/SER(+) 19
FP6703-2 F2 20
FP6703-1 SCAN2 21
MENU
AF/MF
REW
FF
STOP
PAUSE
PLAY
F1(DIG E)
F2(PIC E)
NV-MD9000EN
SIDE(R) CASE UNIT
SCHEMATIC DIAGRAM
C
B
A
1
2
3
4
5

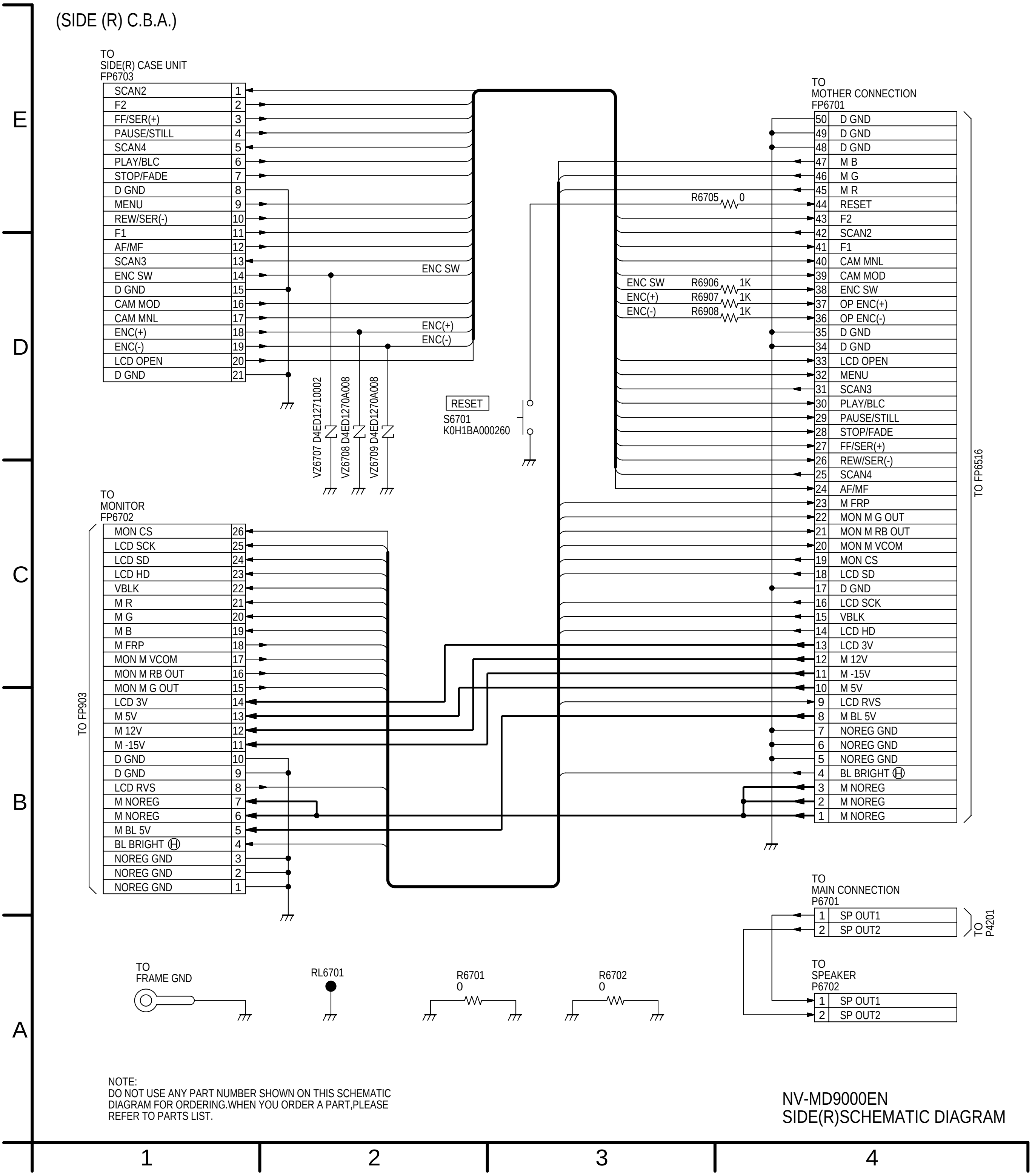
11.14. MIC UNIT SCHEMATIC DIAGRAM



(MIC UNIT)
:AUDIO MAIN SIGNAL PATH
MICRO PHONE
ECM(R)
M4801
WM-61A102A
ECM(L)
M4802
WM-61A102A
JRA4901
JLA4901
JGA4901
R4801
3900
R4803
56K
C4801
0.027
Q4801
2SD1819AR
(AMP)
R4805
100K
R4807
3300
R4802
3900
R4804
56K
C4802
0.027
Q4802
2SD1819AR
(AMP)
R4806
100K
R4808
3300
R4809
0
TO
MIC JACK
FP4801
1 MIC 5V FP4902-6
2 MIC 5V FP4902-5
3 MIC OUT R FP4902-4
4 MIC OUT L FP4902-3
5 MIC GND FP4902-2
6 MIC GND FP4902-1
NV-MD9000EN
MIC UNIT SCHEMATIC DIAGRAM
C
B
A
1
2
3
4

11.15

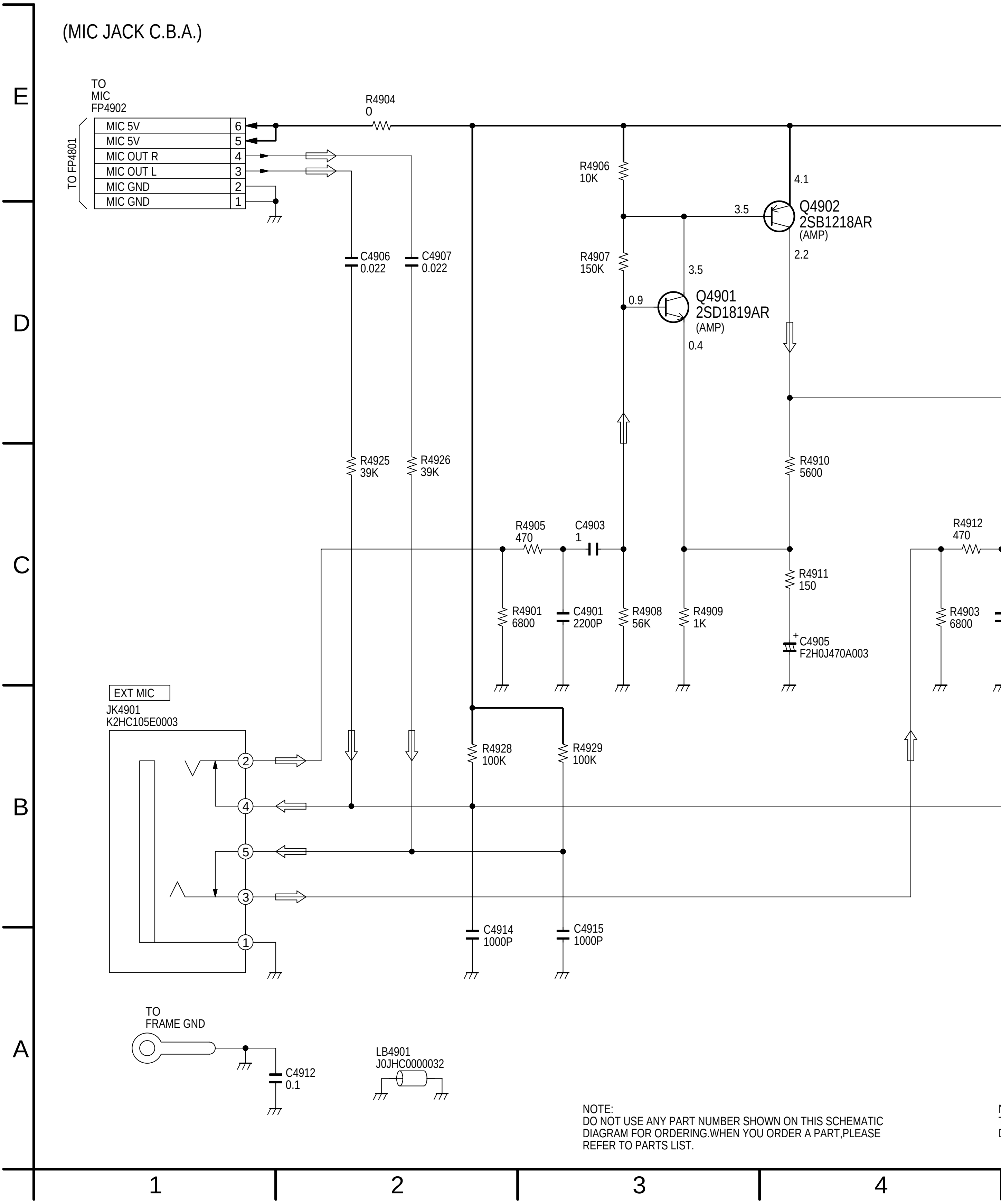
11.15. SIDE (R) SCHEMATIC DIAGRAM


(SIDE (R) C.B.A.)
TO SIDE(R) CASE UNIT FP6703
1 SCAN2
2 F2
3 FF/SER(+)
4 PAUSE/STILL
5 SCAN4
6 PLAY/BLC
7 STOP/FADE
8 D GND
9 MENU
10 REW/SER(-)
11 F1
12 AF/MF
13 SCAN3
14 ENC SW
15 D GND
16 CAM MOD
17 CAM MNL
18 ENC(+)
19 ENC(-)
20 LCD OPEN
21 D GND
ENC SW
ENC(+)
ENC(-)
VZ6707 D4ED12710002
VZ6708 D4ED1270A008
VZ6709 D4ED1270A008
RESET
S6701
K0H1BA000260
TO MOTHER CONNECTION FP6701
50 D GND
49 D GND
48 D GND
47 M B
46 M G
45 M R
44 RESET
43 F2
42 SCAN2
41 F1
40 CAM MNL
39 CAM MOD
38 ENC SW
37 OP ENC(+)
36 OP ENC(-)
35 D GND
34 D GND
33 LCD OPEN
32 MENU
31 SCAN3
30 PLAY/BLC
29 PAUSE/STILL
28 STOP/FADE
27 FF/SER(+)
26 REW/SER(-)
25 SCAN4
24 AF/MF
23 M FRP
22 MON M G OUT
21 MON M RB OUT
20 MON M VCOM
19 MON CS
18 LCD SD
17 D GND
16 LCD SCK
15 VBLK
14 LCD HD
13 LCD 3V
12 M 12V
11 M -15V
10 M 5V
9 LCD RVS
8 M BL 5V
7 NOREG GND
6 NOREG GND
5 NOREG GND
4 BL BRIGHT Ⓗ
3 M NOREG
2 M NOREG
1 M NOREG
TO FP6516
R6705 0
ENC SW R6906 1K
ENC(+) R6907 1K
ENC(-) R6908 1K
TO MONITOR FP6702
26 MON CS
25 LCD SCK
24 LCD SD
23 LCD HD
22 VBLK
21 M R
20 M G
19 M B
18 M FRP
17 MON M VCOM
16 MON M RB OUT
15 MON M G OUT
14 LCD 3V
13 M 5V
12 M 12V
11 M -15V
10 D GND
9 D GND
8 LCD RVS
7 M NOREG
6 M NOREG
5 M BL 5V
4 BL BRIGHT Ⓗ
3 NOREG GND
2 NOREG GND
1 NOREG GND
TO FP903
TO MAIN CONNECTION P6701
1 SP OUT1
2 SP OUT2
TO P4201
TO SPEAKER P6702
1 SP OUT1
2 SP OUT2
TO FRAME GND
RL6701
R6701 0
R6702 0
E
D
C
B
A
1
2
3
4

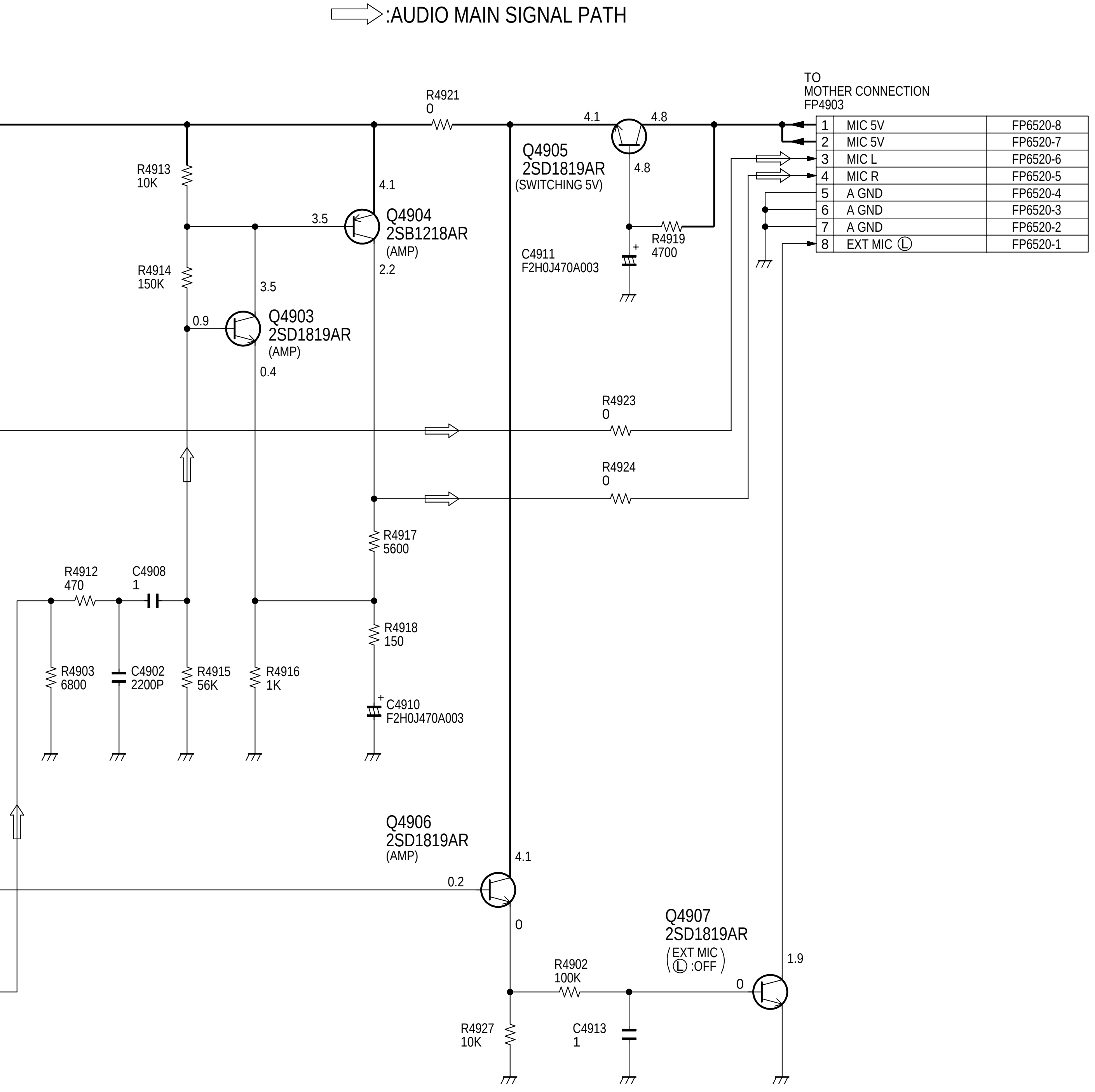
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-MD9000EN
SIDE(R)SCHEMATIC DIAGRAM

11.16. MIC JACK SCHEMATIC DIAGRAM


(MIC JACK C.B.A.)
E
D
C
B
A
1
2
3
4
TO
MIC
FP4902
TO FP4801
MIC 5V 6
MIC 5V 5
MIC OUT R 4
MIC OUT L 3
MIC GND 2
MIC GND 1
R4904
0
R4906
10K
4.1
3.5
Q4902
2SB1218AR
(AMP)
2.2
R4907
150K
3.5
0.9
Q4901
2SD1819AR
(AMP)
0.4
C4906
0.022
C4907
0.022
R4925
39K
R4926
39K
R4910
5600
R4905
470
C4903
1
R4912
470
R4911
150
R4901
6800
C4901
2200P
R4908
56K
R4909
1K
R4903
6800
C4905
F2H0J470A003
EXT MIC
JK4901
K2HC105E0003
R4928
100K
R4929
100K
C4914
1000P
C4915
1000P
TO
FRAME GND
C4912
0.1
LB4901
J0JHC0000032

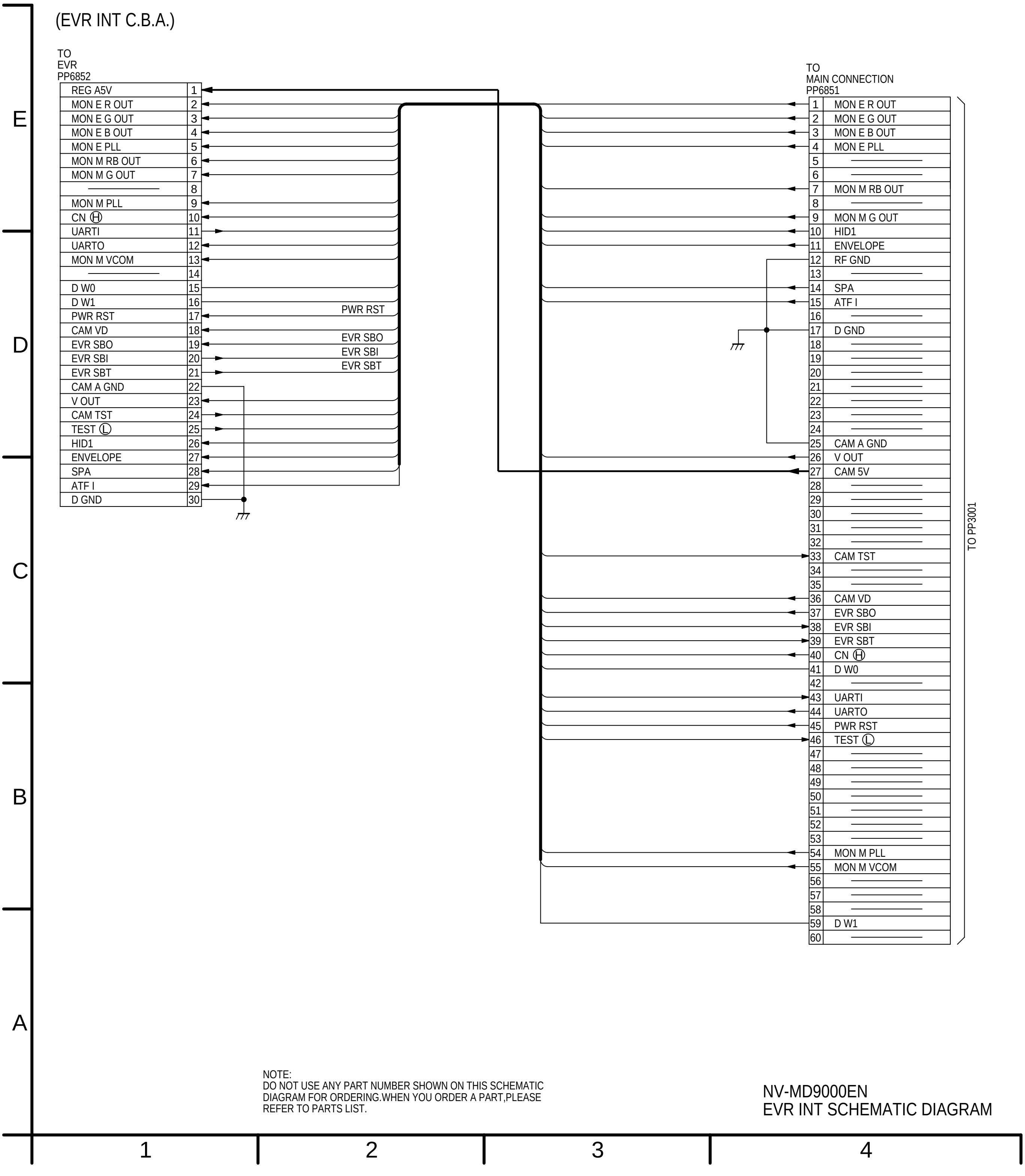
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.


:AUDIO MAIN SIGNAL PATH
TO
MOTHER CONNECTION
FP4903
1 MIC 5V FP6520-8
2 MIC 5V FP6520-7
3 MIC L FP6520-6
4 MIC R FP6520-5
5 A GND FP6520-4
6 A GND FP6520-3
7 A GND FP6520-2
8 EXT MIC Ⓛ FP6520-1
R4921
0
4.1
4.8
Q4905
2SD1819AR
(SWITCHING 5V)
4.8
R4919
4700
C4911
F2H0J470A003
R4913
10K
4.1
3.5
Q4904
2SB1218AR
(AMP)
2.2
R4914
150K
3.5
0.9
Q4903
2SD1819AR
(AMP)
0.4
R4923
0
R4924
0
R4917
5600
R4912
470
C4908
1
R4918
150
R4903
6800
C4902
2200P
R4915
56K
R4916
1K
C4910
F2H0J470A003
Q4906
2SD1819AR
(AMP)
4.1
0.2
0
Q4907
2SD1819AR
(EXT MIC Ⓛ :OFF)
1.9
0
R4902
100K
R4927
10K
C4913
1

NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS
DIAGRAM IS REC MODE.

NV-MD9000EN
MIC JACK SCHEMATIC DIAGRAM

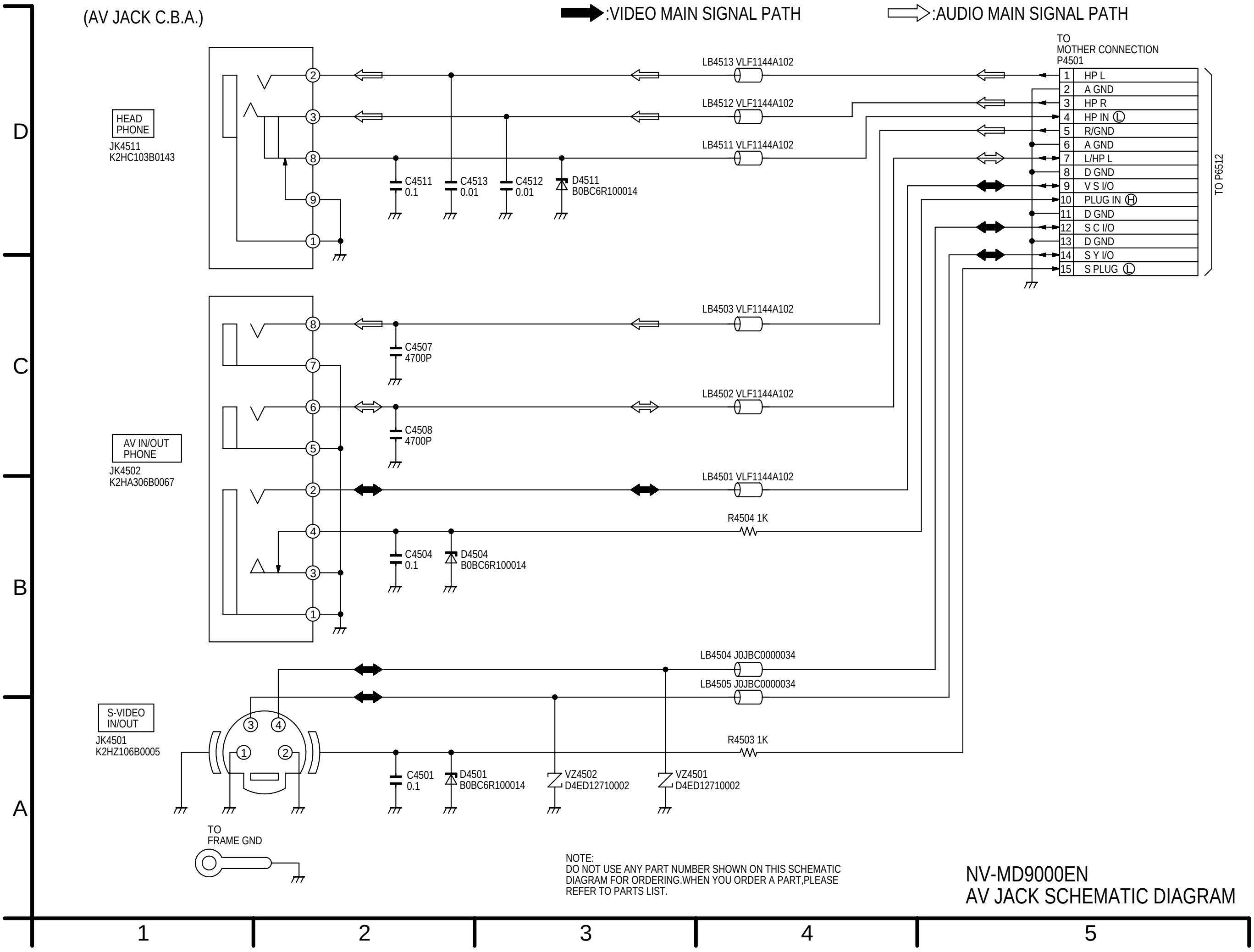
11.17. EVR INT SCHEMATIC DIAGRAM


(EVR INT C.B.A.)
TO
EVR
PP6852
1 REG A5V
2 MON E R OUT
3 MON E G OUT
4 MON E B OUT
5 MON E PLL
6 MON M RB OUT
7 MON M G OUT
8
9 MON M PLL
10 CN Ⓗ
11 UARTI
12 UARTO
13 MON M VCOM
14
15 D W0
16 D W1
17 PWR RST
18 CAM VD
19 EVR SBO
20 EVR SBI
21 EVR SBT
22 CAM A GND
23 V OUT
24 CAM TST
25 TEST Ⓛ
26 HID1
27 ENVELOPE
28 SPA
29 ATF I
30 D GND
PWR RST
EVR SBO
EVR SBI
EVR SBT
TO
MAIN CONNECTION
PP6851
1 MON E R OUT
2 MON E G OUT
3 MON E B OUT
4 MON E PLL
5
6
7 MON M RB OUT
8
9 MON M G OUT
10 HID1
11 ENVELOPE
12 RF GND
13
14 SPA
15 ATF I
16
17 D GND
18
19
20
21
22
23
24
25 CAM A GND
26 V OUT
27 CAM 5V
28
29
30
31
32
33 CAM TST
34
35
36 CAM VD
37 EVR SBO
38 EVR SBI
39 EVR SBT
40 CN Ⓗ
41 D W0
42
43 UARTI
44 UARTO
45 PWR RST
46 TEST Ⓛ
47
48
49
50
51
52
53
54 MON M PLL
55 MON M VCOM
56
57
58
59 D W1
60
TO PP3001
E
D
C
B
A
1
2
3
4

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC
DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE
REFER TO PARTS LIST.

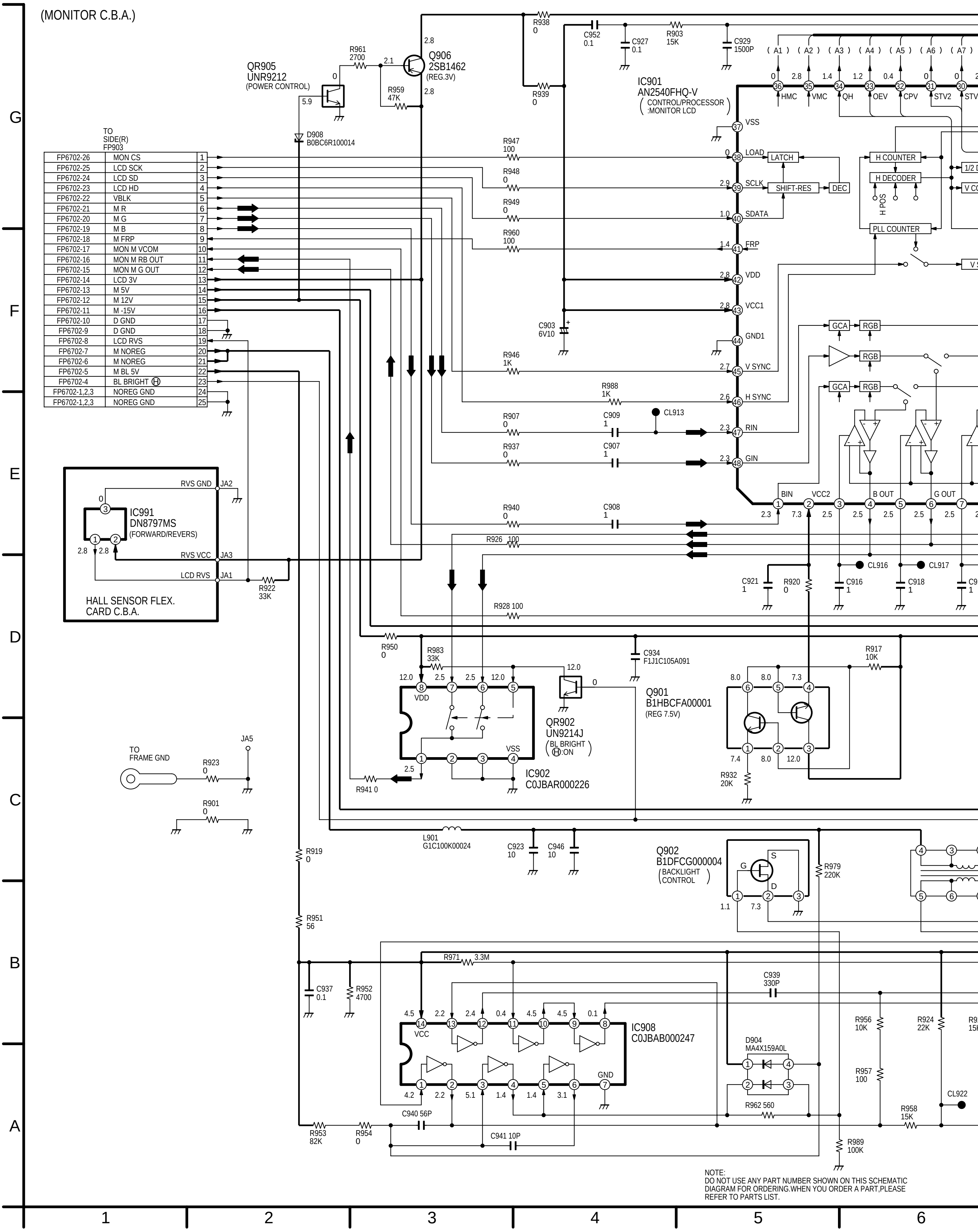
NV-MD9000EN
EVR INT SCHEMATIC DIAGRAM

11.18. AV JACK SCHEMATIC DIAGRAM

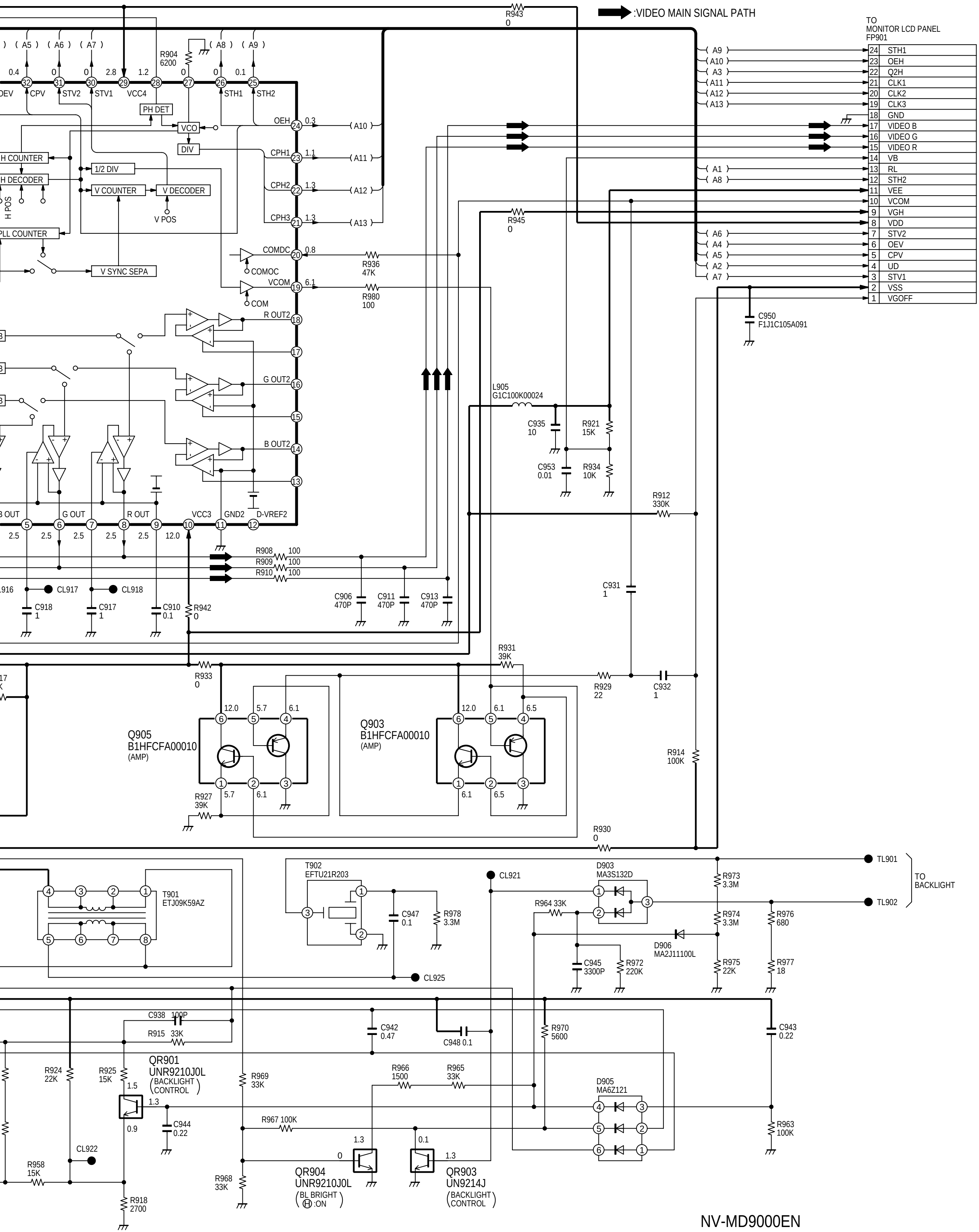

(AV JACK C.B.A.)
:VIDEO MAIN SIGNAL PATH
:AUDIO MAIN SIGNAL PATH
TO
MOTHER CONNECTION
P4501
1 HP L
2 A GND
3 HP R
4 HP IN Ⓛ
5 R/GND
6 A GND
7 L/HP L
8 D GND
9 V S I/O
10 PLUG IN Ⓗ
11 D GND
12 S C I/O
13 D GND
14 S Y I/O
15 S PLUG Ⓛ
TO P6512
HEAD PHONE
JK4511
K2HC103B0143
LB4513 VLF1144A102
LB4512 VLF1144A102
LB4511 VLF1144A102
C4511 0.1
C4513 0.01
C4512 0.01
D4511 B0BC6R100014
AV IN/OUT PHONE
JK4502
K2HA306B0067
LB4503 VLF1144A102
C4507 4700P
LB4502 VLF1144A102
C4508 4700P
LB4501 VLF1144A102
R4504 1K
C4504 0.1
D4504 B0BC6R100014
S-VIDEO IN/OUT
JK4501
K2HZ106B0005
LB4504 J0JBC0000034
LB4505 J0JBC0000034
R4503 1K
C4501 0.1
D4501 B0BC6R100014
VZ4502 D4ED12710002
VZ4501 D4ED12710002
TO
FRAME GND
D
C
B
A
1
2
3
4
5
NV-MD9000EN
AV JACK SCHEMATIC DIAGRAM

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

11.19. MONITOR & HALL SENSOR FLEX. CARD SCHEMATIC DIAGRAM


(MONITOR C.B.A.)
QR905
UNR9212
(POWER CONTROL)
R961
2700
Q906
2SB1462
(REG.3V)
R959
47K
D908
B0BC6R100014
R938
0
R939
0
C952
0.1
C927
0.1
R903
15K
C929
1500P
IC901
AN2540FHQ-V
(CONTROL/PROCESSOR :MONITOR LCD)
A1
A2
A3
A4
A5
A6
A7
HMC
VMC
QH
OEV
CPV
STV2
VSS
LOAD
LATCH
SCLK
SHIFT-RES
DEC
SDATA
FRP
VDD
VCC1
GND1
V SYNC
H SYNC
RIN
GIN
BIN
VCC2
B OUT
G OUT
H COUNTER
H DECODER
H POS
PLL COUNTER
GCA
RGB
TO SIDE(R) FP903
FP6702-26 MON CS 1
FP6702-25 LCD SCK 2
FP6702-24 LCD SD 3
FP6702-23 LCD HD 4
FP6702-22 VBLK 5
FP6702-21 M R 6
FP6702-20 M G 7
FP6702-19 M B 8
FP6702-18 M FRP 9
FP6702-17 MON M VCOM 10
FP6702-16 MON M RB OUT 11
FP6702-15 MON M G OUT 12
FP6702-14 LCD 3V 13
FP6702-13 M 5V 14
FP6702-12 M 12V 15
FP6702-11 M -15V 16
FP6702-10 D GND 17
FP6702-9 D GND 18
FP6702-8 LCD RVS 19
FP6702-7 M NOREG 20
FP6702-6 M NOREG 21
FP6702-5 M BL 5V 22
FP6702-4 BL BRIGHT Ⓗ 23
FP6702-1,2,3 NOREG GND 24
FP6702-1,2,3 NOREG GND 25
R947 100
R948 0
R949 0
R960 100
C903 6V10
R946 1K
R988 1K
CL913
R907 0
C909 1
R937 0
C907 1
R940 0
C908 1
R926 100
R928 100
CL916
CL917
C921 1
R920 0
C916 1
C918 1
IC991
DN8797MS
(FORWARD/REVERS)
RVS GND
JA2
RVS VCC
JA3
LCD RVS
JA1
R922 33K
HALL SENSOR FLEX. CARD C.B.A.
R950 0
R983 33K
C934
F1J1C105A091
R917 10K
IC902
C0JBAR000226
VDD
VSS
QR902
UN9214J
(BL BRIGHT Ⓗ:ON)
Q901
B1HBCFA00001
(REG 7.5V)
R932 20K
R941 0
TO FRAME GND
JA5
R923 0
R901 0
L901
G1C100K00024
C923 10
C946 10
R919 0
Q902
B1DFCG000004
(BACKLIGHT CONTROL)
G
S
D
R979 220K
R951 56
R971 3.3M
C937 0.1
R952 4700
C939 330P
IC908
C0JBAB000247
VCC
GND
R956 10K
R924 22K
D904
MA4X159A0L
R957 100
R962 560
R958 15K
CL922
C940 56P
C941 10P
R953 82K
R954 0
R989 100K
G
F
E
D
C
B
A
1
2
3
4
5
6

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.


:VIDEO MAIN SIGNAL PATH
TO
MONITOR LCD PANEL
FP901
24 STH1
23 OEH
22 Q2H
21 CLK1
20 CLK2
19 CLK3
18 GND
17 VIDEO B
16 VIDEO G
15 VIDEO R
14 VB
13 RL
12 STH2
11 VEE
10 VCOM
9 VGH
8 VDD
7 STV2
6 OEV
5 CPV
4 UD
3 STV1
2 VSS
1 VGOFF
R943
0
R904
6200
PH DET
VCO
DIV
H COUNTER
1/2 DIV
H DECODER
V COUNTER
V DECODER
H POS
V POS
PLL COUNTER
V SYNC SEPA
OEH
CPH1
CPH2
CPH3
COMDC
COMOC
VCOM
COM
R OUT2
G OUT2
B OUT2
B OUT
G OUT
R OUT
VCC3
GND2
D-VREF2
STV2
STV1
VCC4
STH1
STH2
CPV
R945
0
R936
47K
R980
100
L905
G1C100K00024
C935
10
R921
15K
C953
0.01
R934
10K
R912
330K
C950
F1J1C105A091
R908 100
R909 100
R910 100
C906
470P
C911
470P
C913
470P
C931
1
CL917
CL918
C918
1
C917
1
C910
0.1
R942
0
R931
39K
R933
0
R929
22
C932
1
Q905
B1HFCFA00010
(AMP)
Q903
B1HFCFA00010
(AMP)
R927
39K
R914
100K
R930
0
T902
EFTU21R203
CL921
D903
MA3S132D
TL901
TL902
TO
BACKLIGHT
R973
3.3M
R974
3.3M
R976
680
R975
22K
R977
18
R964 33K
C947
0.1
R978
3.3M
D906
MA2J11100LL
C945
3300P
R972
220K
T901
ETJ09K59AZ
CL925
C938 100P
R915 33K
C942
0.47
C948 0.1
R970
5600
C943
0.22
QR901
UNR9210J0L
(BACKLIGHT CONTROL)
R924
22K
R925
15K
R969
33K
R966
1500
R965
33K
D905
MA6Z121
C944
0.22
R967 100K
R963
100K
CL922
R958
15K
R968
33K
QR904
UNR9210J0L
(BL BRIGHT Ⓗ:ON)
QR903
UN9214J
(BACKLIGHT CONTROL)
R918
2700

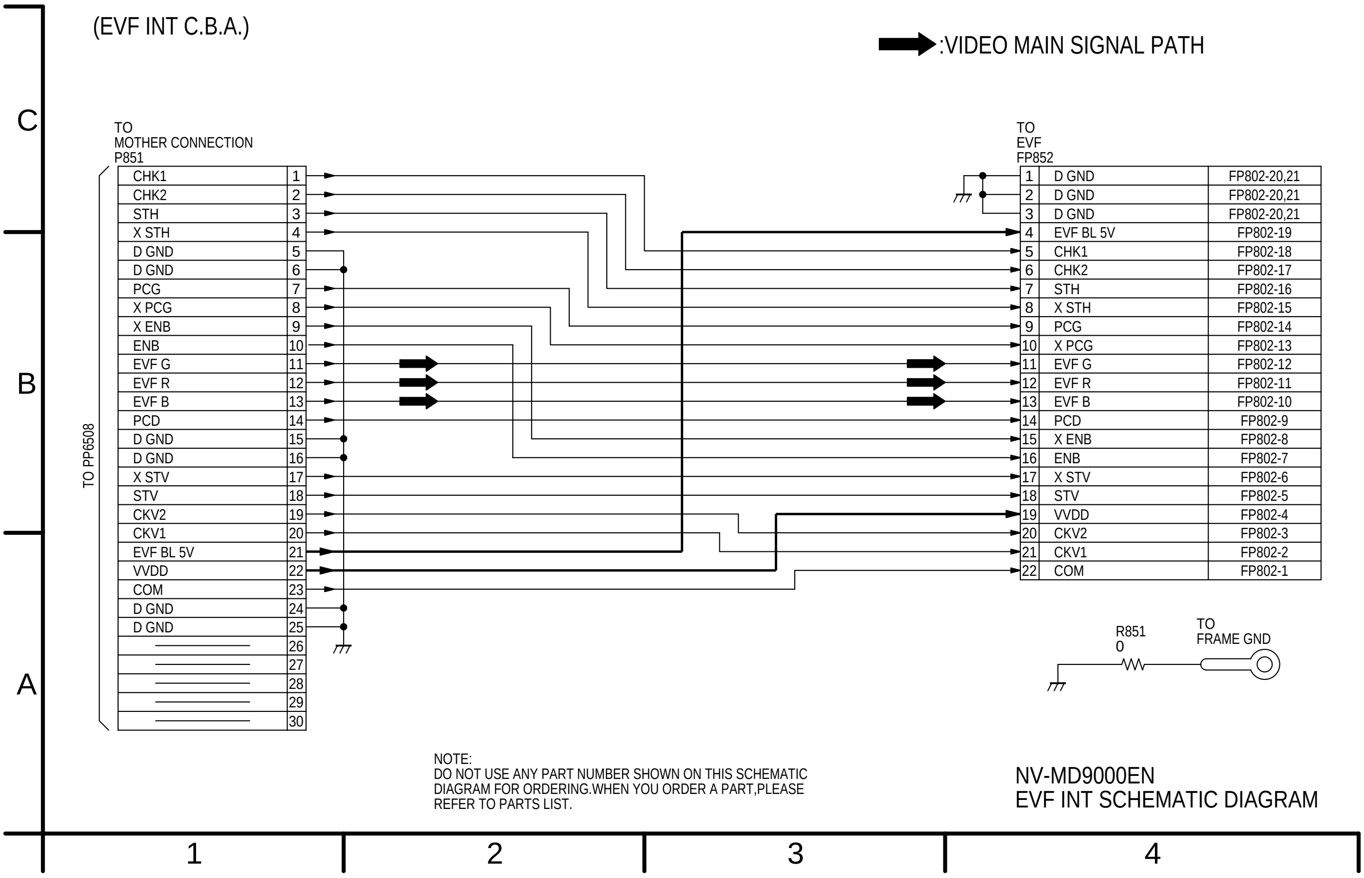
CHEMATIC
T,PLEASE

NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS
DIAGRAM IS STOP MODE.(MONITOR:ON)

NV-MD9000EN
MONITOR & HALL SENSOR FLEX.CARD
SCHEMATIC DIAGRAM

6	7	8	9	10	11

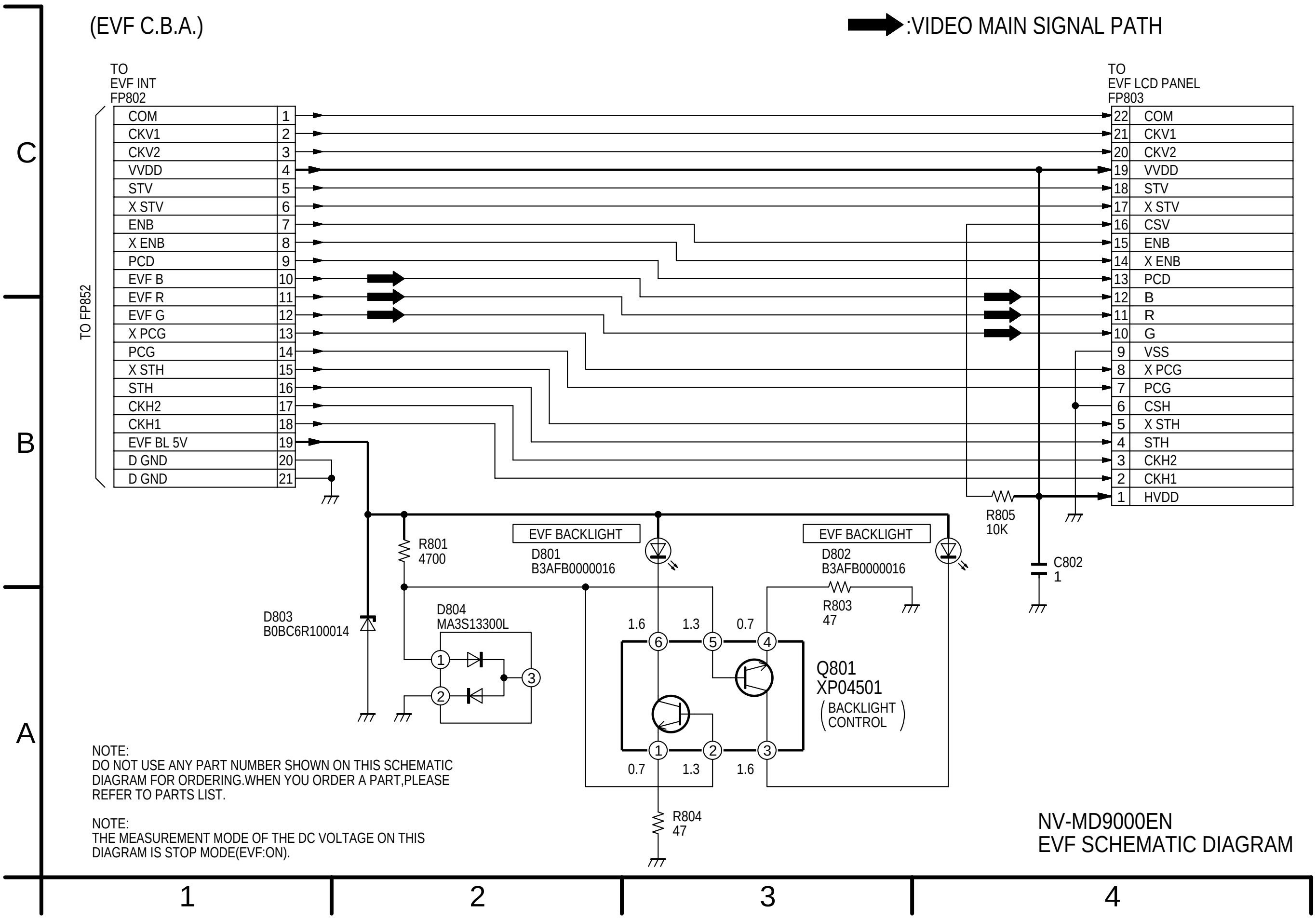
11.20. EVF INT SCHEMATIC DIAGRAM


(EVF INT C.B.A.)
:VIDEO MAIN SIGNAL PATH
TO
MOTHER CONNECTION
P851
TO PP6508
CHK1 1
CHK2 2
STH 3
X STH 4
D GND 5
D GND 6
PCG 7
X PCG 8
X ENB 9
ENB 10
EVF G 11
EVF R 12
EVF B 13
PCD 14
D GND 15
D GND 16
X STV 17
STV 18
CKV2 19
CKV1 20
EVF BL 5V 21
VVDD 22
COM 23
D GND 24
D GND 25
26
27
28
29
30
TO
EVF
FP852
1 D GND FP802-20,21
2 D GND FP802-20,21
3 D GND FP802-20,21
4 EVF BL 5V FP802-19
5 CHK1 FP802-18
6 CHK2 FP802-17
7 STH FP802-16
8 X STH FP802-15
9 PCG FP802-14
10 X PCG FP802-13
11 EVF G FP802-12
12 EVF R FP802-11
13 EVF B FP802-10
14 PCD FP802-9
15 X ENB FP802-8
16 ENB FP802-7
17 X STV FP802-6
18 STV FP802-5
19 VVDD FP802-4
20 CKV2 FP802-3
21 CKV1 FP802-2
22 COM FP802-1
R851
0
TO
FRAME GND
C
B
A
1
2
3
4

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-MD9000EN
EVF INT SCHEMATIC DIAGRAM

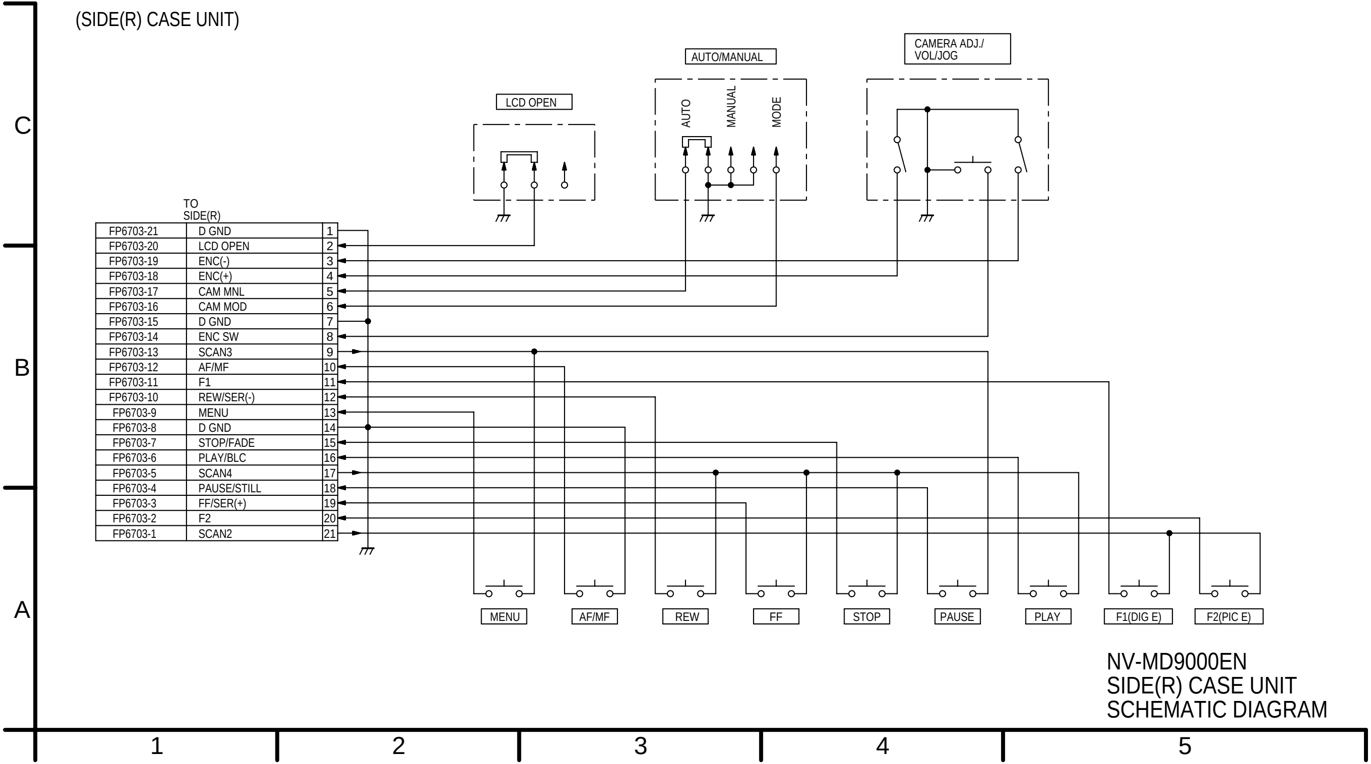
11.21. EVF SCHEMATIC DIAGRAM


(EVF C.B.A.)
:VIDEO MAIN SIGNAL PATH
TO
EVF INT
FP802
TO FP852
COM 1
CKV1 2
CKV2 3
VVDD 4
STV 5
X STV 6
ENB 7
X ENB 8
PCD 9
EVF B 10
EVF R 11
EVF G 12
X PCG 13
PCG 14
X STH 15
STH 16
CKH2 17
CKH1 18
EVF BL 5V 19
D GND 20
D GND 21
TO
EVF LCD PANEL
FP803
22 COM
21 CKV1
20 CKV2
19 VVDD
18 STV
17 X STV
16 CSV
15 ENB
14 X ENB
13 PCD
12 B
11 R
10 G
9 VSS
8 X PCG
7 PCG
6 CSH
5 X STH
4 STH
3 CKH2
2 CKH1
1 HVDD
R805
10K
C802
1
R801
4700
EVF BACKLIGHT
D801
B3AFB0000016
EVF BACKLIGHT
D802
B3AFB0000016
R803
47
D803
B0BC6R100014
D804
MA3S13300L
1.6
1.3
0.7
0.7
1.3
1.6
Q801
XP04501
(BACKLIGHT CONTROL)
R804
47
C
B
A
1
2
3
4

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE(EVF:ON).

NV-MD9000EN
EVF SCHEMATIC DIAGRAM


(SIDE(R) CASE UNIT)
LCD OPEN
AUTO/MANUAL
AUTO
MANUAL
MODE
CAMERA ADJ./
VOL/JOG
TO
SIDE(R)
FP6703-21 D GND 1
FP6703-20 LCD OPEN 2
FP6703-19 ENC(-) 3
FP6703-18 ENC(+) 4
FP6703-17 CAM MNL 5
FP6703-16 CAM MOD 6
FP6703-15 D GND 7
FP6703-14 ENC SW 8
FP6703-13 SCAN3 9
FP6703-12 AF/MF 10
FP6703-11 F1 11
FP6703-10 REW/SER(-) 12
FP6703-9 MENU 13
FP6703-8 D GND 14
FP6703-7 STOP/FADE 15
FP6703-6 PLAY/BLC 16
FP6703-5 SCAN4 17
FP6703-4 PAUSE/STILL 18
FP6703-3 FF/SER(+) 19
FP6703-2 F2 20
FP6703-1 SCAN2 21
MENU
AF/MF
REW
FF
STOP
PAUSE
PLAY
F1(DIG E)
F2(PIC E)
C
B
A
1
2
3
4
5

NV-MD9000EN
SIDE(R) CASE UNIT
SCHEMATIC DIAGRAM

(VEP06F11A)

NOTE:MULTILAYER C.B.A.

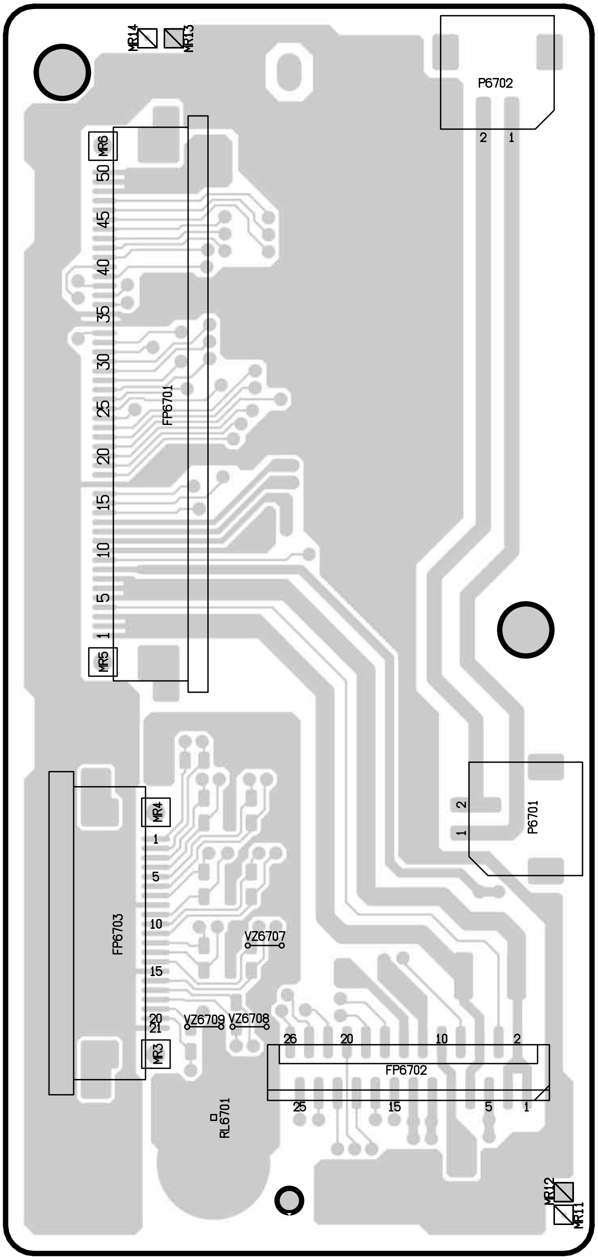
THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT-PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.

E

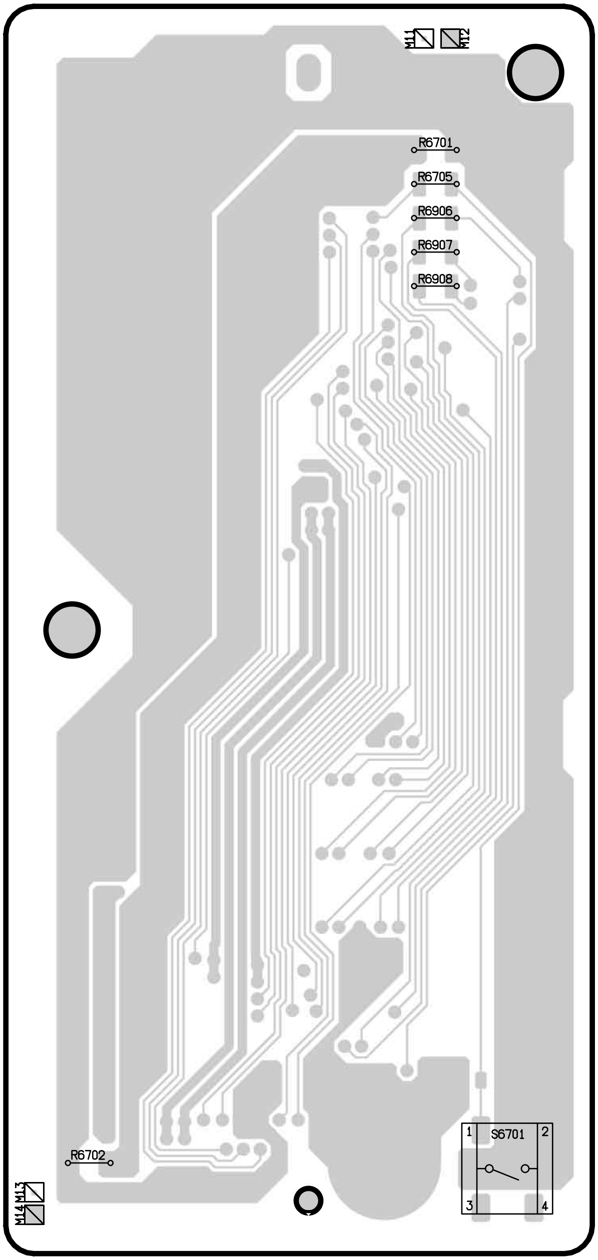
D

C

B


MR14
MR13
P6702
2
1
MR6
50
45
40
35
30
25
20
15
10
5
1
FP6701
MR5
MR4
FP6703
1
5
10
15
20
21
VZ6707
VZ6709
VZ6708
MR3
26
20
10
2
FP6702
25
15
5
1
RL6701
P6701
2
1
MR12
MR11

(COMPONENT SIDE)


M11
M12
R6701
R6705
R6906
R6907
R6908
R6702
M13
M14
S6701
1
2
3
4

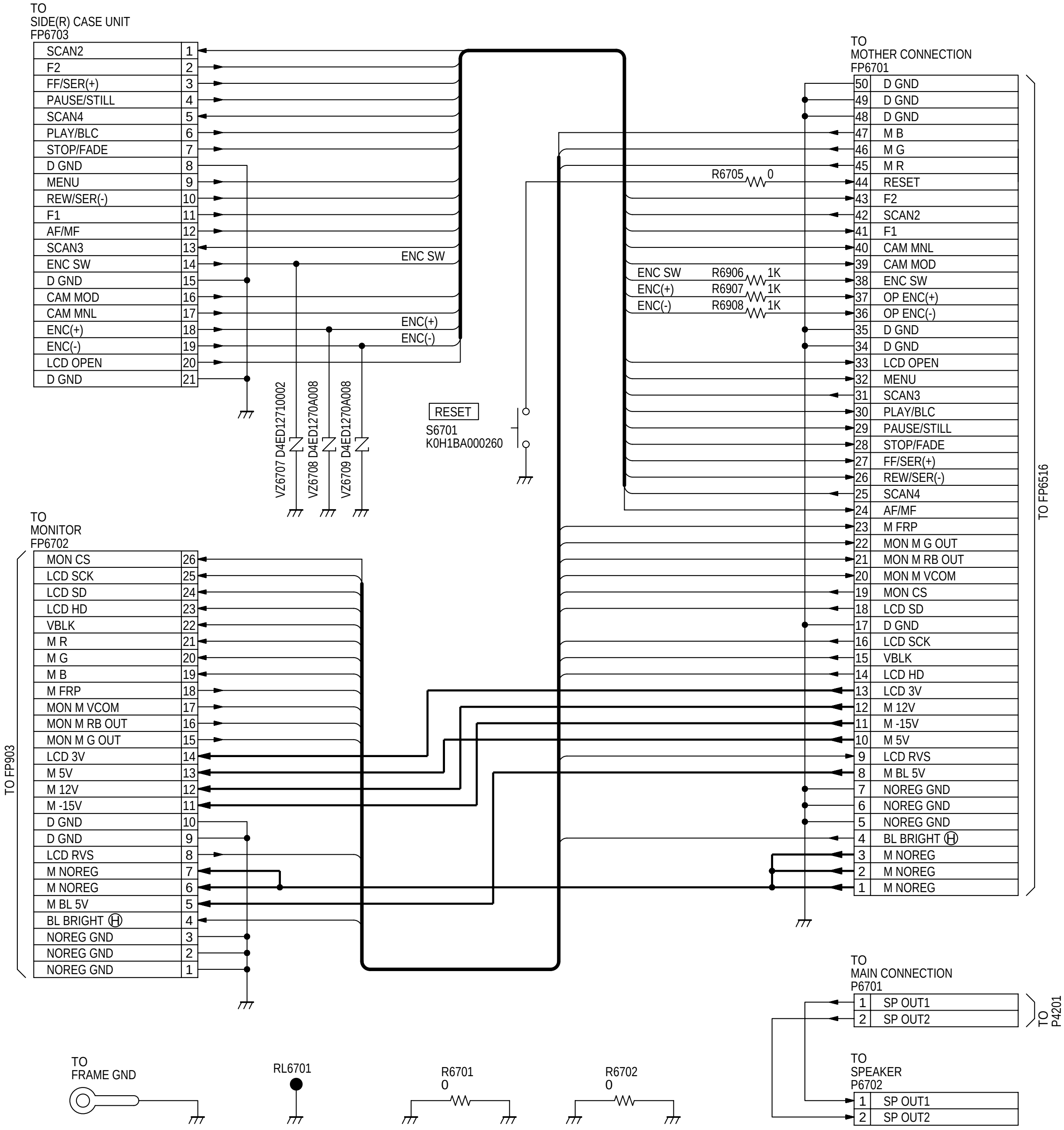
(FOIL SIDE)

A

NV-MD9000EN
SIDE (R) C.B.A.

1 2 3 4 5

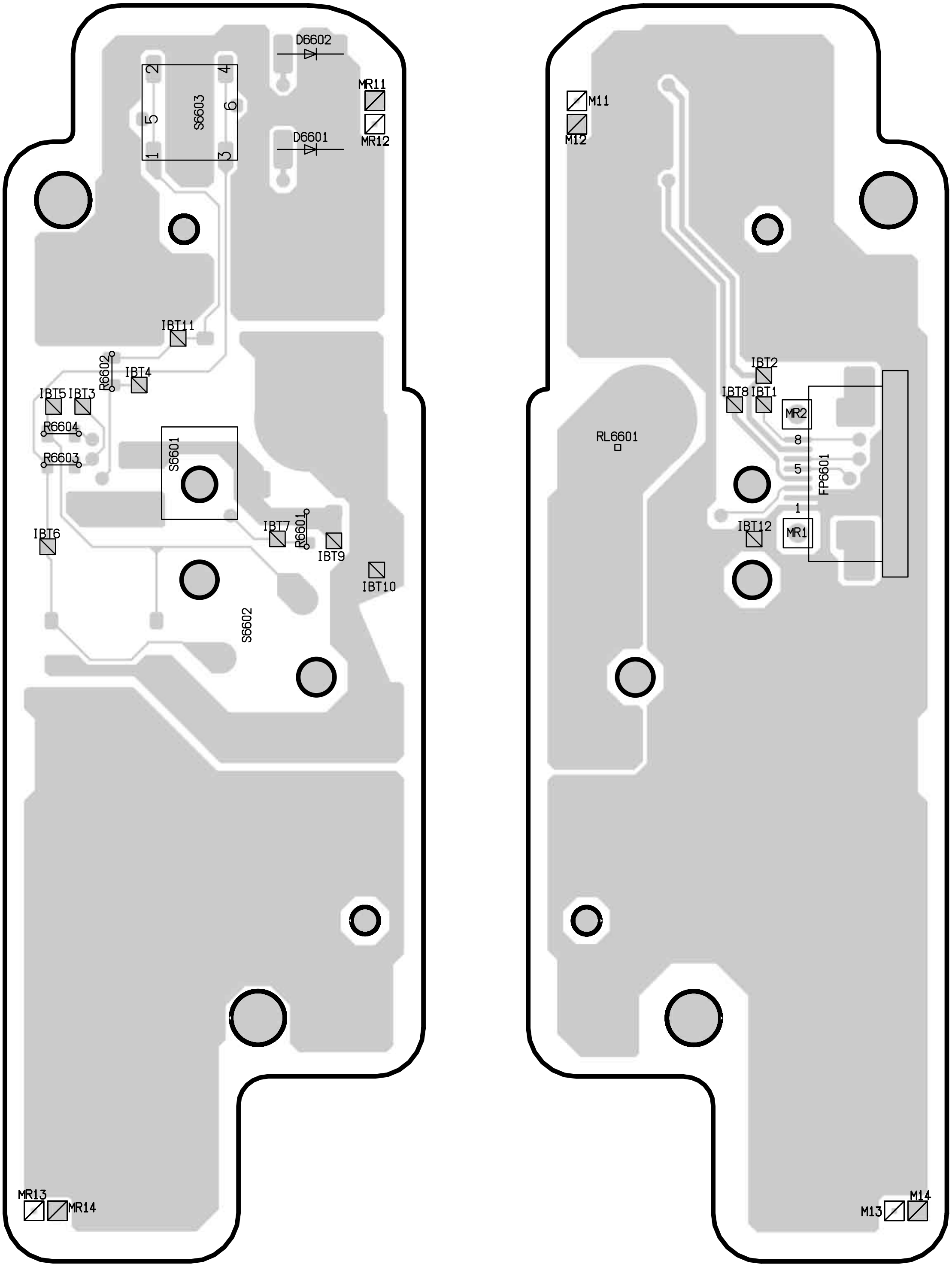
(SIDE (R) C.B.A.)


TO
SIDE(R) CASE UNIT
FP6703
1 SCAN2
2 F2
3 FF/SER(+)
4 PAUSE/STILL
5 SCAN4
6 PLAY/BLC
7 STOP/FADE
8 D GND
9 MENU
10 REW/SER(-)
11 F1
12 AF/MF
13 SCAN3
14 ENC SW
15 D GND
16 CAM MOD
17 CAM MNL
18 ENC(+)
19 ENC(-)
20 LCD OPEN
21 D GND
ENC SW
ENC(+)
ENC(-)
VZ6707 D4ED12710002
VZ6708 D4ED1270A008
VZ6709 D4ED1270A008
RESET
S6701
K0H1BA000260
TO
MOTHER CONNECTION
FP6701
50 D GND
49 D GND
48 D GND
47 M B
46 M G
45 M R
44 RESET
43 F2
42 SCAN2
41 F1
40 CAM MNL
39 CAM MOD
38 ENC SW
37 OP ENC(+)
36 OP ENC(-)
35 D GND
34 D GND
33 LCD OPEN
32 MENU
31 SCAN3
30 PLAY/BLC
29 PAUSE/STILL
28 STOP/FADE
27 FF/SER(+)
26 REW/SER(-)
25 SCAN4
24 AF/MF
23 M FRP
22 MON M G OUT
21 MON M RB OUT
20 MON M VCOM
19 MON CS
18 LCD SD
17 D GND
16 LCD SCK
15 VBLK
14 LCD HD
13 LCD 3V
12 M 12V
11 M -15V
10 M 5V
9 LCD RVS
8 M BL 5V
7 NOREG GND
6 NOREG GND
5 NOREG GND
4 BL BRIGHT Ⓗ
3 M NOREG
2 M NOREG
1 M NOREG
TO FP6516
R6705 0
ENC SW R6906 1K
ENC(+) R6907 1K
ENC(-) R6908 1K
TO
MONITOR
FP6702
TO FP903
26 MON CS
25 LCD SCK
24 LCD SD
23 LCD HD
22 VBLK
21 M R
20 M G
19 M B
18 M FRP
17 MON M VCOM
16 MON M RB OUT
15 MON M G OUT
14 LCD 3V
13 M 5V
12 M 12V
11 M -15V
10 D GND
9 D GND
8 LCD RVS
7 M NOREG
6 M NOREG
5 M BL 5V
4 BL BRIGHT Ⓗ
3 NOREG GND
2 NOREG GND
1 NOREG GND
TO
MAIN CONNECTION
P6701
1 SP OUT1
2 SP OUT2
TO P4201
TO
SPEAKER
P6702
1 SP OUT1
2 SP OUT2
TO
FRAME GND
RL6701
R6701
0
R6702
0

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC
DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE
REFER TO PARTS LIST.

NV-MD9000EN
SIDE(R)SCHEMATIC DIAGRAM

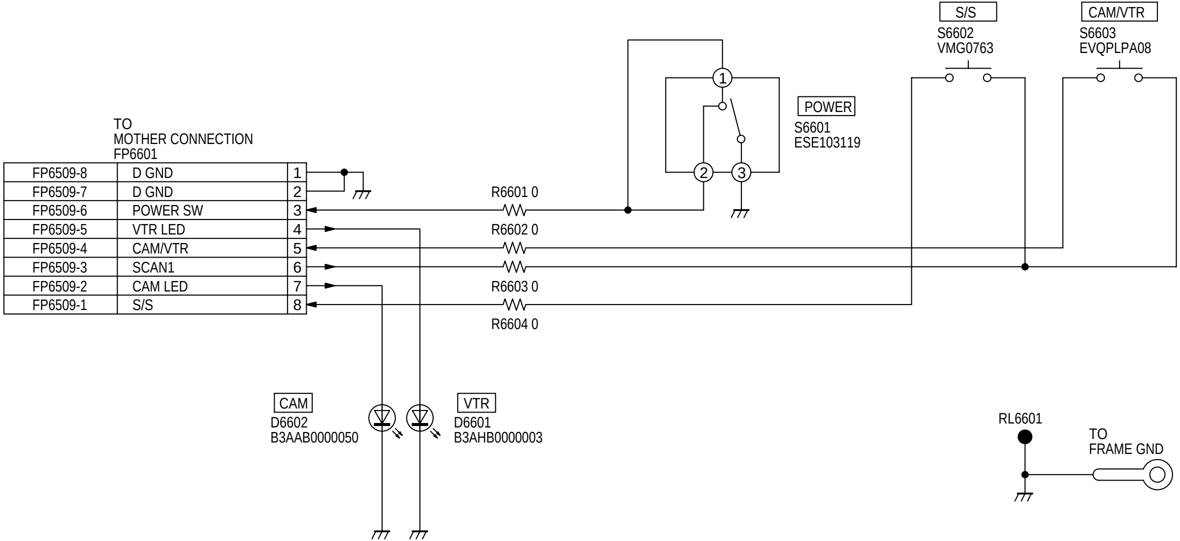
(VEP06F14A)


F
E
D
C
B
A
1
2
3
4
5
D6602
S6603
2
4
5
6
1
3
MR11
MR12
D6601
IBT11
R6602
IBT4
IBT5
IBT3
R6604
R6603
S6601
IBT6
IBT7
R6601
IBT9
IBT10
S6602
MR13
MR14
M11
M12
IBT2
IBT8
IBT1
MR2
RL6601
8
5
FP6601
1
IBT12
MR1
M13
M14

(COMPONENT SIDE) (FOIL SIDE)

NV-MD9000EN
S/S & POWER C.B.A.

(S/S & POWER C.B.A.)


TO
MOTHER CONNECTION
FP6601
FP6509-8 D GND 1
FP6509-7 D GND 2
FP6509-6 POWER SW 3
FP6509-5 VTR LED 4
FP6509-4 CAM/VTR 5
FP6509-3 SCAN1 6
FP6509-2 CAM LED 7
FP6509-1 S/S 8
R6601 0
R6602 0
R6603 0
R6604 0
1
2
3
POWER
S6601
ESE103119
S/S
S6602
VMG0763
CAM/VTR
S6603
EVQPLPA08
CAM
D6602
B3AAB0000050
VTR
D6601
B3AHB0000003

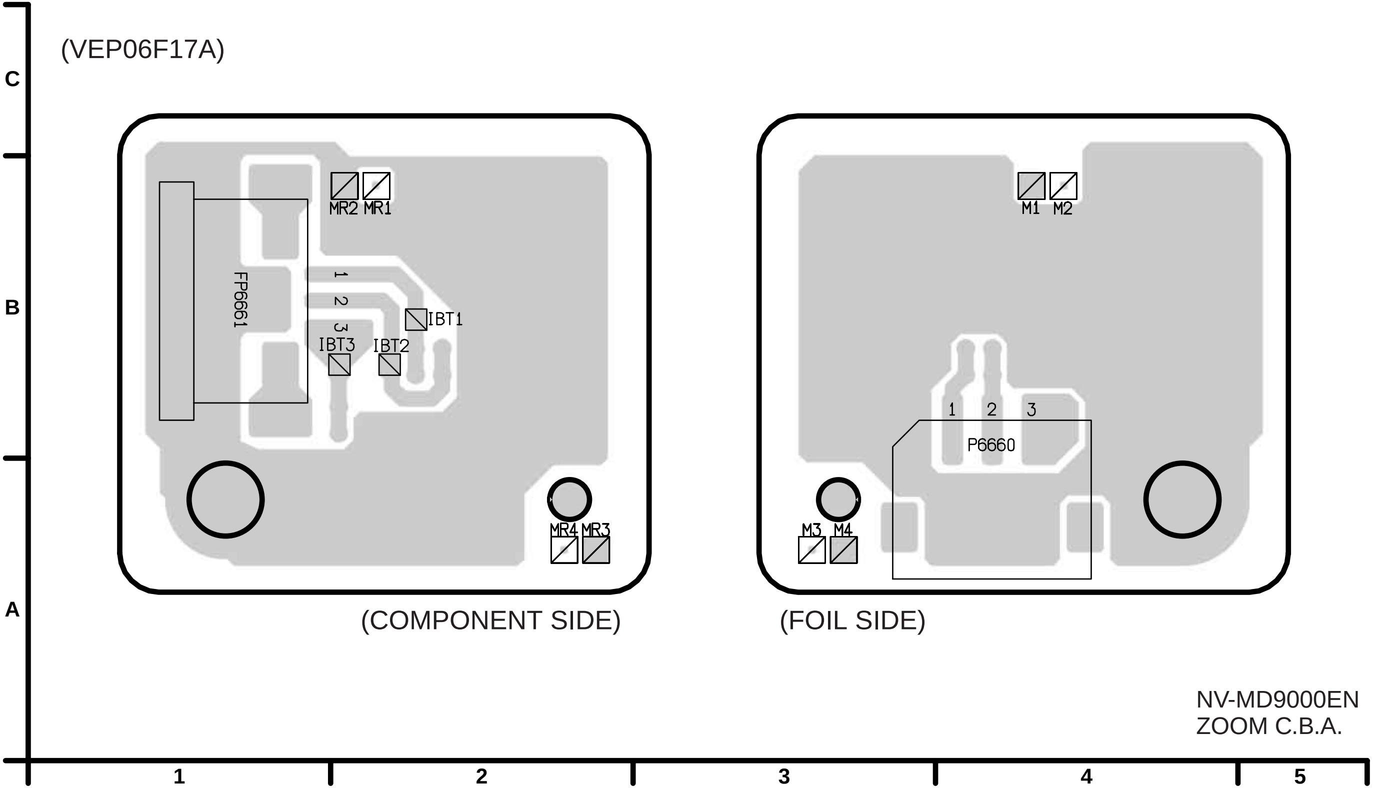
RL6601
TO
FRAME GND

C
B
A
1
2
3
4

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-MD9000EN
S/S & POWER
SCHEMATIC DIAGRAM

(VEP06F17A)


C
B
A
1
2
3
4
5
MR2
MR1
FP6661
1
2
3
IBT1
IBT3
IBT2
MR4
MR3
M1
M2
1
2
3
P6660
M3
M4

(COMPONENT SIDE)

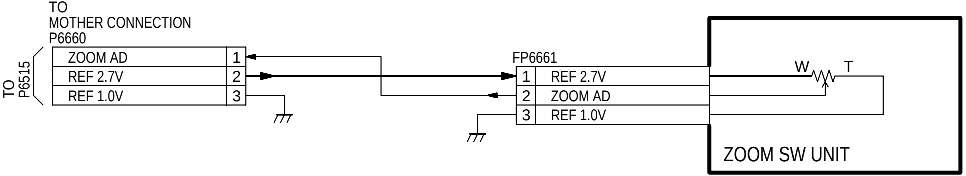
(FOIL SIDE)

NV-MD9000EN
ZOOM C.B.A.

B

(ZOOM C.B.A.)

A


TO
MOTHER CONNECTION
P6660
TO
P6515
ZOOM AD
REF 2.7V
REF 1.0V
1
2
3
FP6661
1
2
3
REF 2.7V
ZOOM AD
REF 1.0V
W
T
ZOOM SW UNIT

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

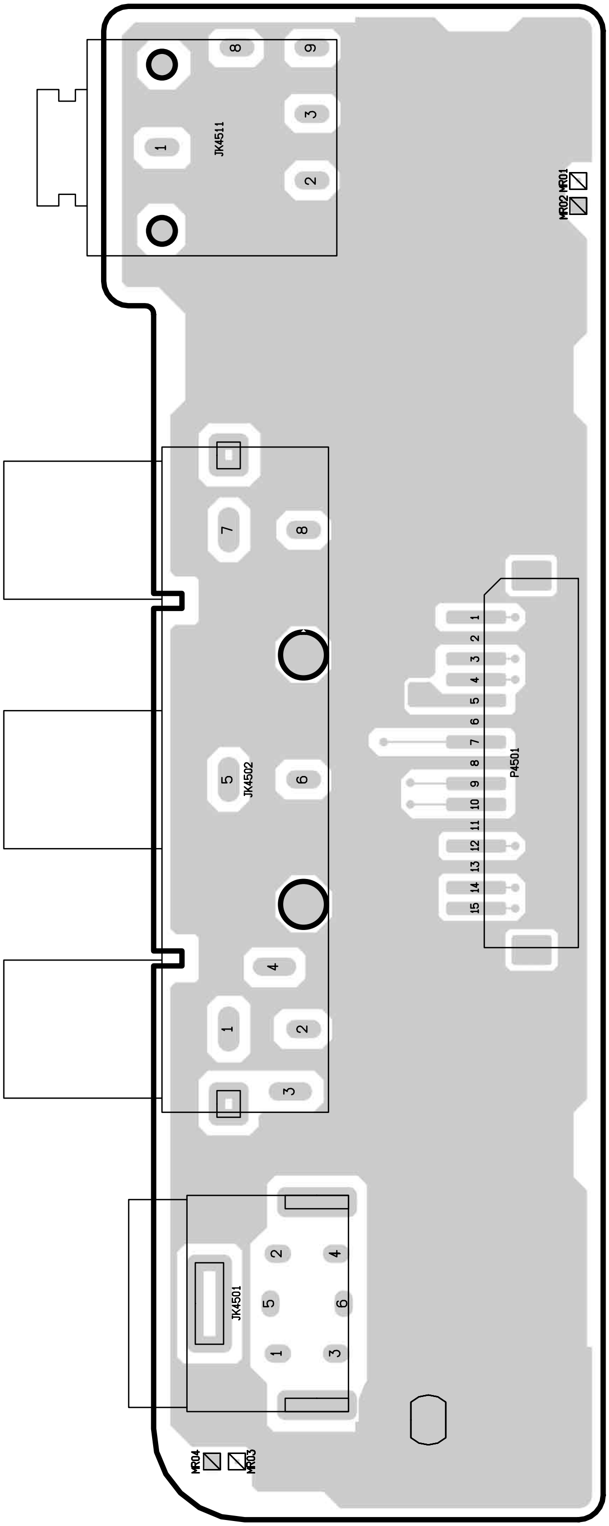
NV-MD9000EN
ZOOM SCHEMATIC DIAGRAM

1 2 3 4

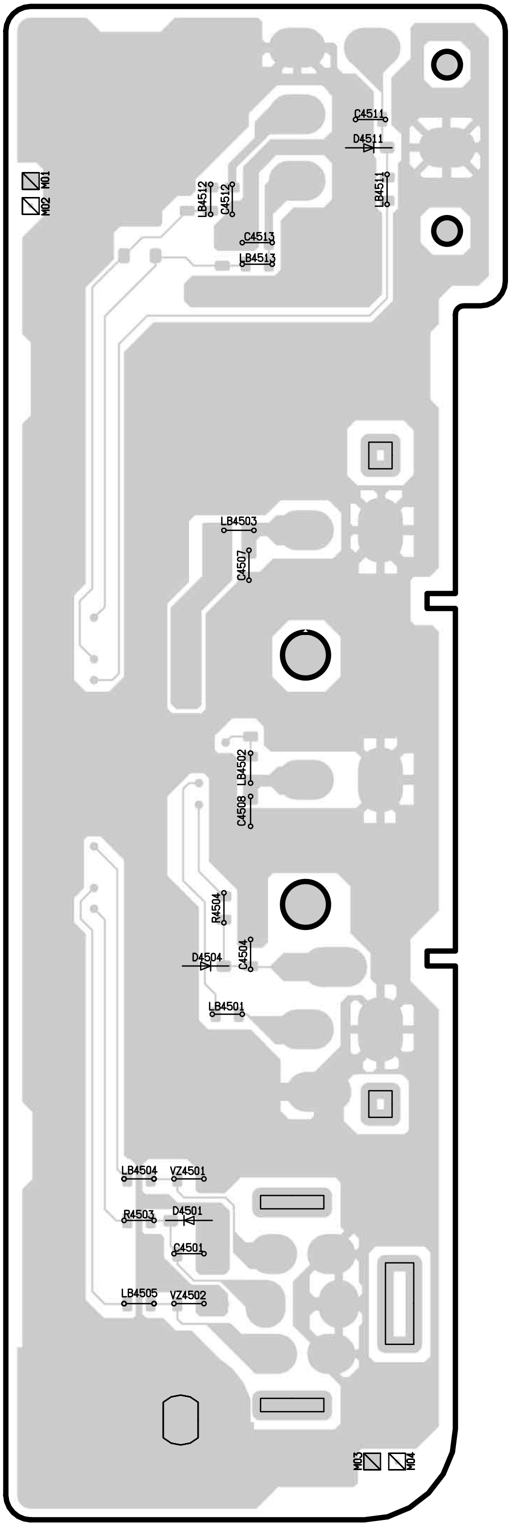
(VEP04824A)

NOTE:MULTILAYER C.B.A.

THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT-PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.


JK4511
8
9
3
1
2
MR01
MR02
JK4502
7
8
5
6
4
1
2
3
P4501
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
JK4501
2
4
5
6
1
3
MR04
MR03

(COMPONENT SIDE)


C4511
D4511
LB4511
LB4512
C4512
C4513
LB4513
M01
M02
LB4503
C4507
LB4502
C4508
R4504
D4504
C4504
LB4501
LB4504
VZ4501
R4503
D4501
C4501
LB4505
VZ4502
M03
M04

(FOIL SIDE)

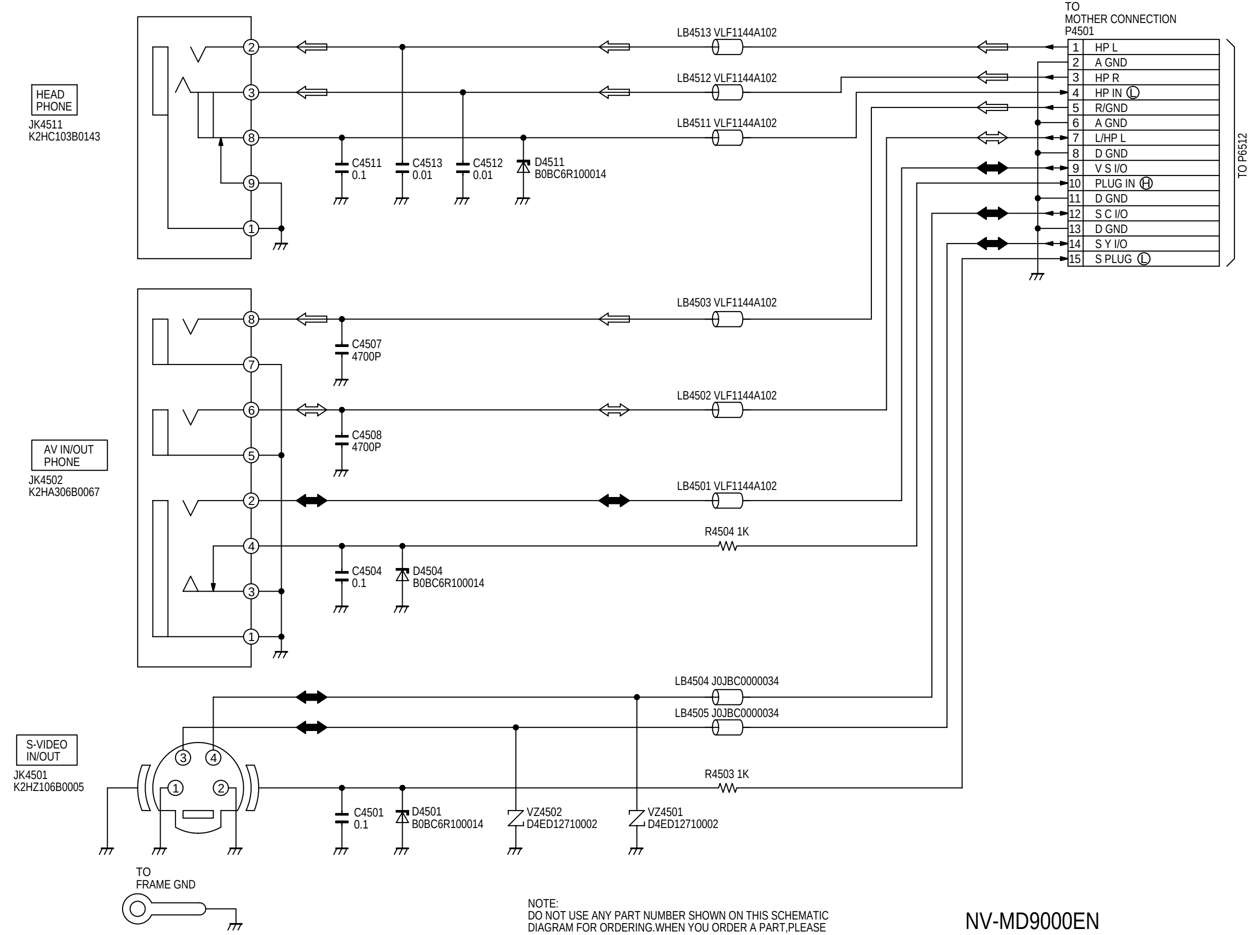
NV-MD9000EN
AV JACK C.B.A.

F
E
D
C
B
A

1 2 3 4 5

(AV JACK C.B.A.)

➡:VIDEO MAIN SIGNAL PATH ⇨:AUDIO MAIN SIGNAL PATH

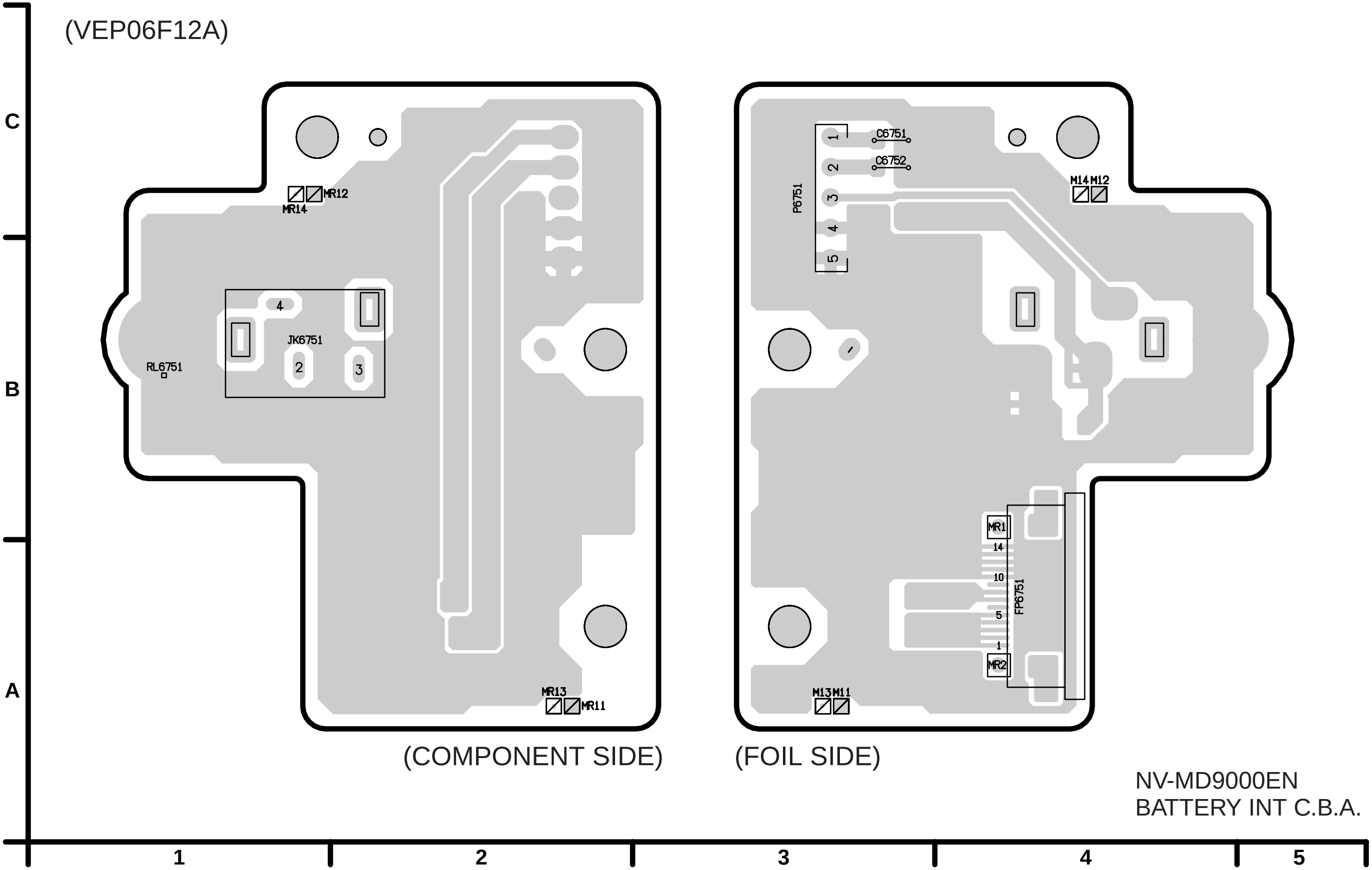

TO
MOTHER CONNECTION
P4501
1 HP L
2 A GND
3 HP R
4 HP IN Ⓛ
5 R/GND
6 A GND
7 L/HP L
8 D GND
9 V S I/O
10 PLUG IN Ⓗ
11 D GND
12 S C I/O
13 D GND
14 S Y I/O
15 S PLUG Ⓛ
TO P6512
HEAD PHONE
JK4511
K2HC103B0143
LB4513 VLF1144A102
LB4512 VLF1144A102
LB4511 VLF1144A102
C4511 0.1
C4513 0.01
C4512 0.01
D4511 B0BC6R100014
AV IN/OUT PHONE
JK4502
K2HA306B0067
LB4503 VLF1144A102
C4507 4700P
LB4502 VLF1144A102
C4508 4700P
LB4501 VLF1144A102
R4504 1K
C4504 0.1
D4504 B0BC6R100014
S-VIDEO IN/OUT
JK4501
K2HZ106B0005
LB4504 J0JBC0000034
LB4505 J0JBC0000034
R4503 1K
C4501 0.1
D4501 B0BC6R100014
VZ4502 D4ED12710002
VZ4501 D4ED12710002
TO
FRAME GND

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-MD9000EN
AV JACK SCHEMATIC DIAGRAM

D
C
B
A
1
2
3
4
5

(VEP06F12A)

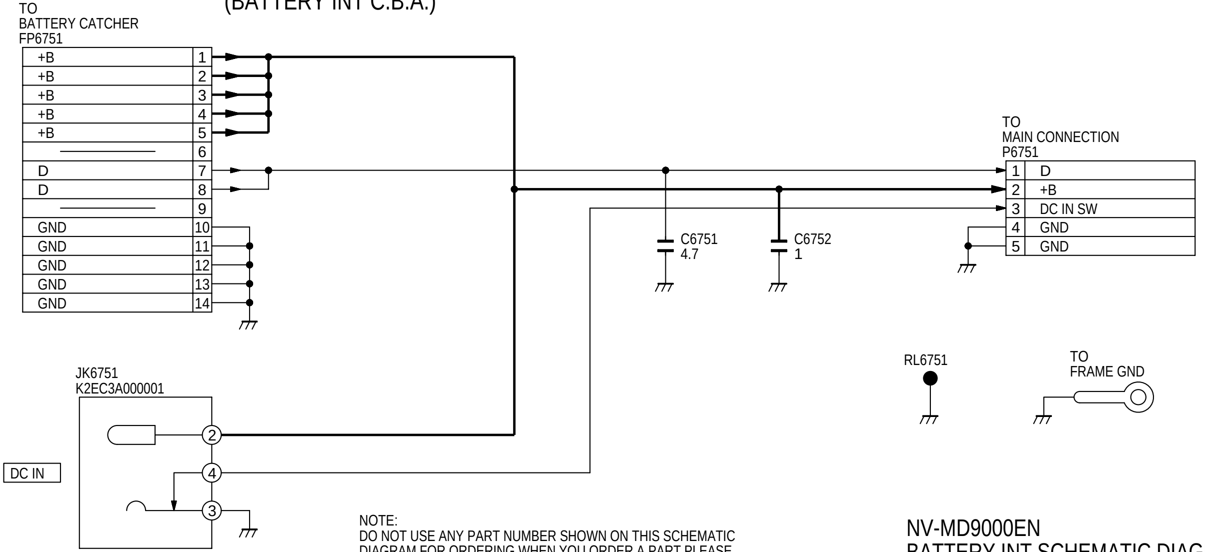

C
B
A
1
2
3
4
5
MR12
MR14
4
JK6751
2
3
RL6751
MR13
MR11
P6751
1
2
3
4
5
C6751
C6752
M14
M12
MR1
14
10
5
1
FP6751
MR2
M13
M11

(COMPONENT SIDE)

(FOIL SIDE)

NV-MD9000EN
BATTERY INT C.B.A.

(BATTERY INT C.B.A.)


TO
BATTERY CATCHER
FP6751
+B 1
+B 2
+B 3
+B 4
+B 5
6
D 7
D 8
9
GND 10
GND 11
GND 12
GND 13
GND 14
TO
MAIN CONNECTION
P6751
1 D
2 +B
3 DC IN SW
4 GND
5 GND
C6751
4.7
C6752
1
JK6751
K2EC3A000001
②
④
③
DC IN
RL6751
TO
FRAME GND
B
A
1
2
3
4

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-MD9000EN
BATTERY INT SCHEMATIC DIAGRAM

ORDER NO. VMD0105012C8

Service Manual

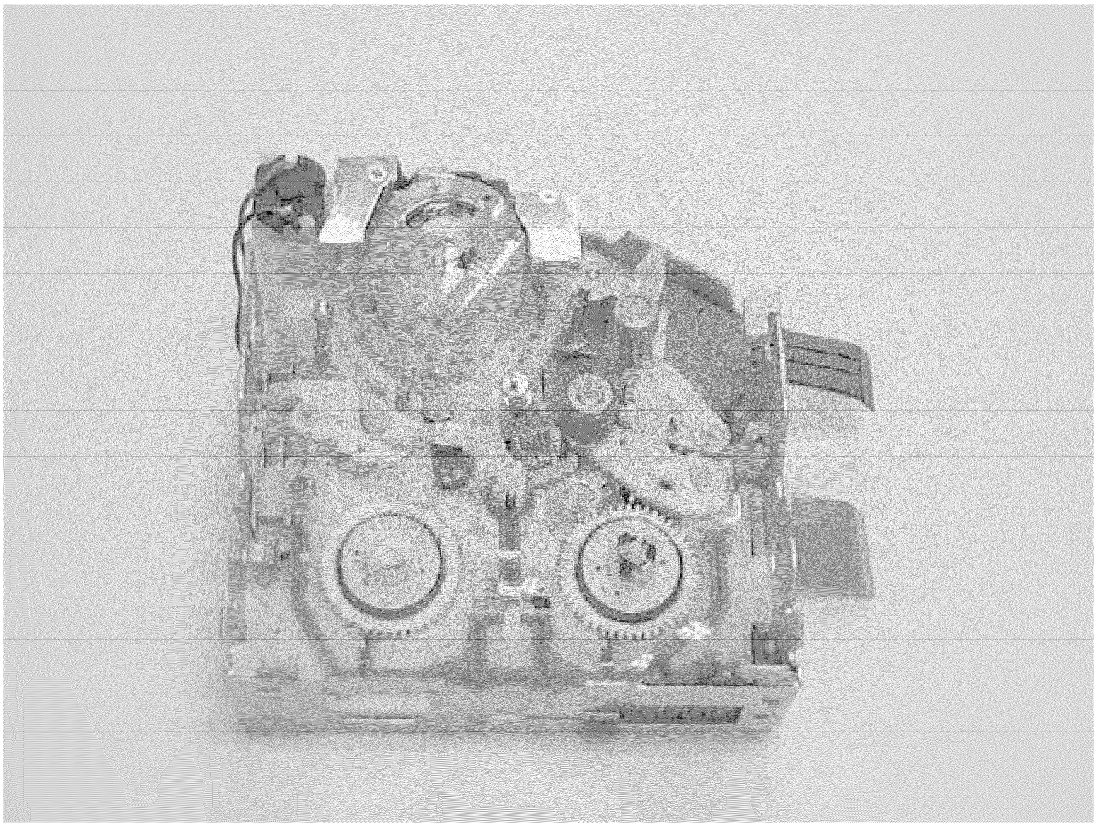
Digital Video Camera/Recorder

Panasonic Mini DV

N-MECHANISM

Disassembly/Assembly Procedures
Adjustment Procedures

SPECIFICATIONS



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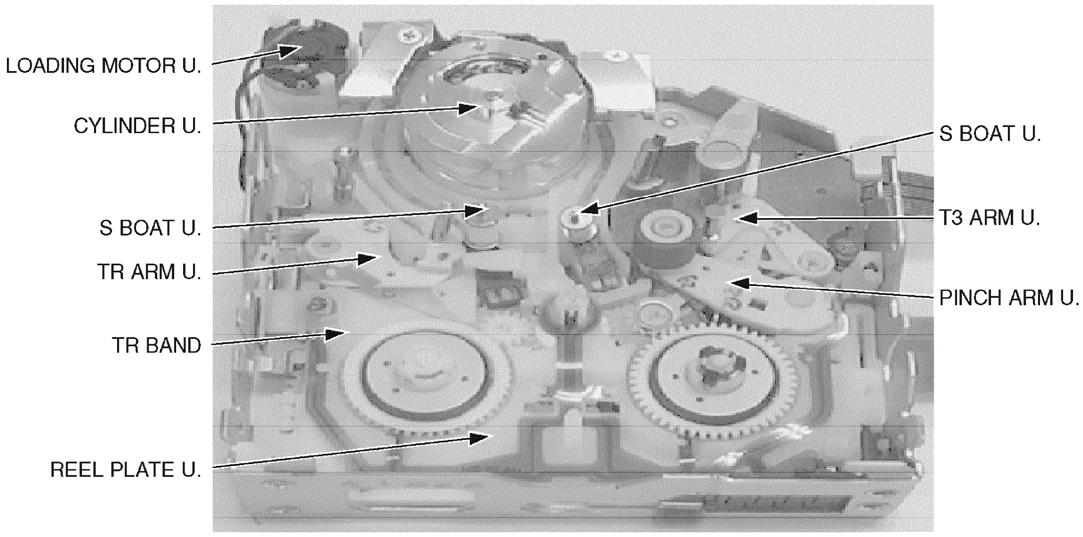
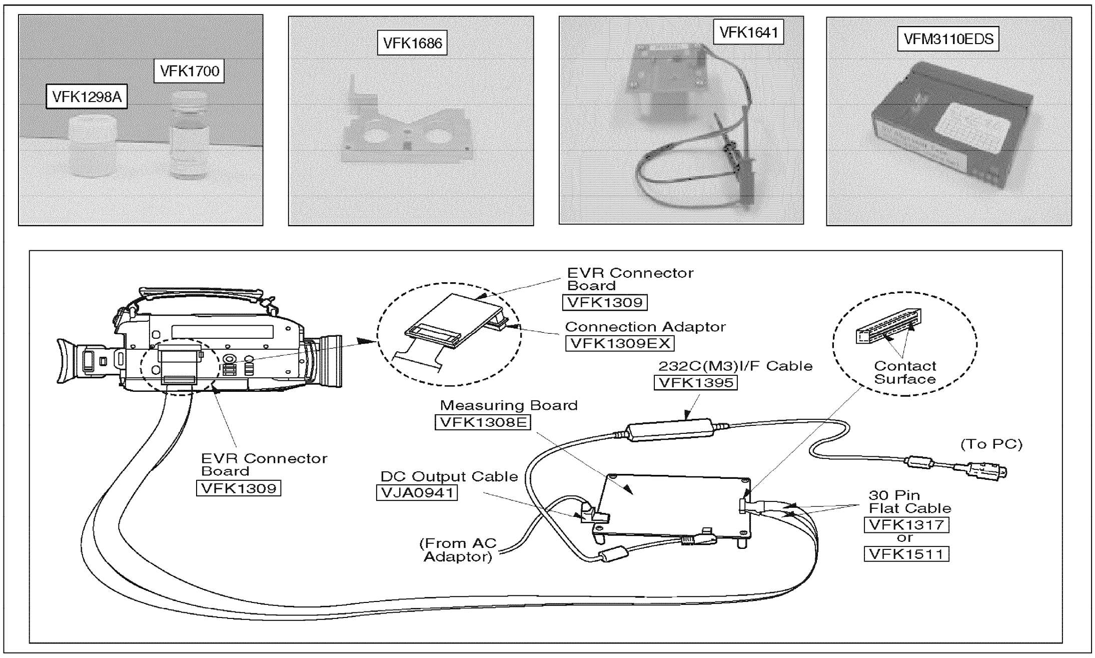
Panasonic

1. MECHANICAL PARTS LOCATION


LOADING MOTOR U.
CYLINDER U.
S BOAT U.
TR ARM U.
TR BAND
REEL PLATE U.
S BOAT U.
T3 ARM U.
PINCH ARM U.

2. SERVICING FIXTURES& TOOLS

Parts Name	Pcs	Parts No.	New	Remarks
Mechanism Oil	**1**	**VFK1700**	**O**	**Pink**
Grease	**1**	**VFK1298A**	**O**	**White**
Tension Adjustment Plate	**1**	**VFK1686**	**O**	
ENV Detector Board	**1**	**VFK1641**	**O**	
DV Alignment Tape	**1**	**VFM3110EDS**	**-**	**PAL**
232C(M3) I/F Cable	**1**	**VFK1395**	**-**	
Mesuring Board	**1**	**VFK1308E**	**-**	
EVR Connector Board	**1**	**VFK1309**	**-**	
Connection Adaptor	**1**	**VFK1309EX**	**-**	
30 pin Flat Cable	**2**	**VFK1317**	**-**	**200mm type**
		VFK1511	**O**	**300mm type**
DC Output Cable	**1**	**VJA0941**	**-**	


VFK1298A
VFK1700
VFK1686
VFK1641
VFM3110EDS
EVR Connector Board
VFK1309
Connection Adaptor
VFK1309EX
232C(M3)I/F Cable
VFK1395
Contact Surface
Measuring Board
VFK1308E
(To PC)
EVR Connector Board
VFK1309
DC Output Cable
VJA0941
30 Pin Flat Cable
VFK1317
or
VFK1511
(From AC Adaptor)

3. DISASSEMBLY PROCEDURE

No.	Item	Fig.	Procedure
1	**Dumper**	Fig. 1	**Release Eject Lever**
		Fig. 2	**Release Lock(A)**
2	**Garage U.**	Fig. 3-1	**Disengage Joints(B) at S and T sides**
		Fig. 3-2	**Disengage Joints(C) at S and T sides (*S side first)**
3	**Mechanism Flexible Cable**	Fig. 4	**1) Desolder each terminal / 2) Release 6 Hooks(D)**
4	**Cylinder U.**	Fig. 5-1	**1)Remove 4 Screws(E) / 2)Remove Cylinder Spring**
		Fig. 5-2	**Remove 1 Screw(F)**
5	**TR Band & TR Arm U.**	Fig. 6	**1)Release Hook(G) / 2)Remove Tension Adj. Screw / 3)Release Lock(H)**
6	**Reel Plate U.**	Fig. 7-1	**Make full loading condition with 3V battery.**
		Fig. 7-2	**Release Lock(I), (J), (K), (L).**
		Fig. 7-3	**Release Lock(M), (N), (O), (P) (*Lock(M) first)**
		Fig. 7-4	**Release Lock(Q)**
		Fig. 7-5	**Release Lock(R), (S)**
		Fig. 7-6	**Take Reel Plate U. out**
7	**Pinch Arm U.**	Fig. 8	**1)Make slightly unloading with 3V battery until Pinch Arm comes off the Capstan / Shaft. / 2)Release Lock(T)**
8	**T3 Arm U.**	Fig. 9	**Release Lock(U)**
9	**Loading Motor U.**	Fig. 10	**Release Locks(V)**
10	**TR Rod**	Fig. 11	**Take TR Rod out**
11	**Brake Gear**	Fig. 12	**Take Brake Gear out**
12	**S-Boat U. & S-Post Loading Band**	Fig. 13	**Pull out S-Loading Band, S-Boat U., T-Loading Band and Boat U.**
13	**T-Boat U. & T-Post Loading Band**		
14	**Rail**	Fig. 14	**Release Locks(W), (X), (Y), (Z), (a)**

No.	Item	Fig.	Procedure
15	Connection Worm	Fig. 15	Take Connection Worm Gear out
16	Mode SW Gear	Fig. 16	Take Mode SW, T Load and Center Gears out
17	T Load Gear		
18	Center Gear		

Fig. 1

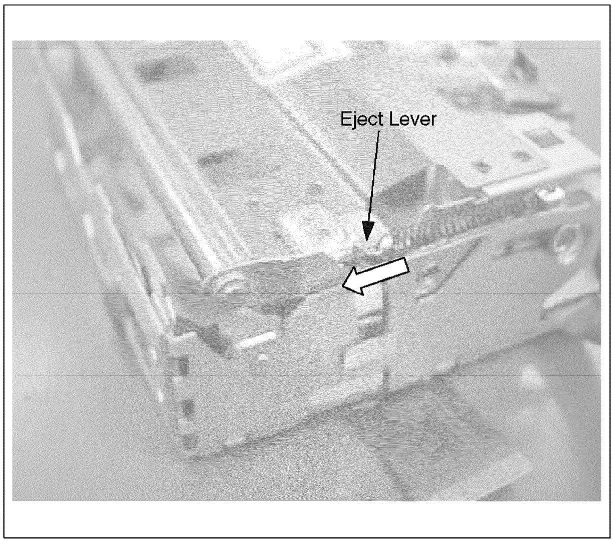


Fig. 2

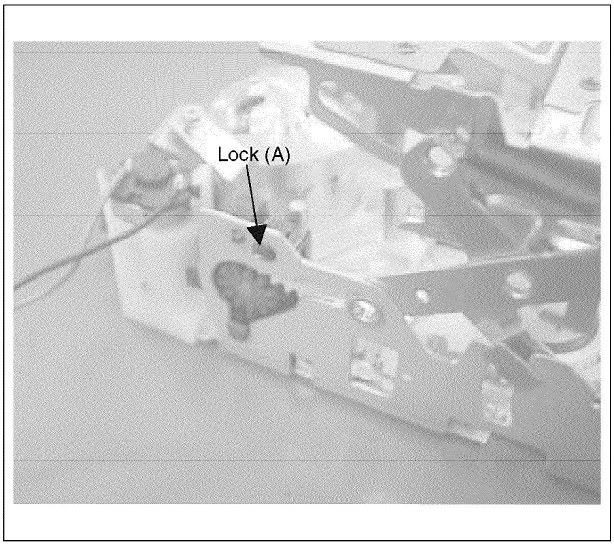


Fig. 3-1

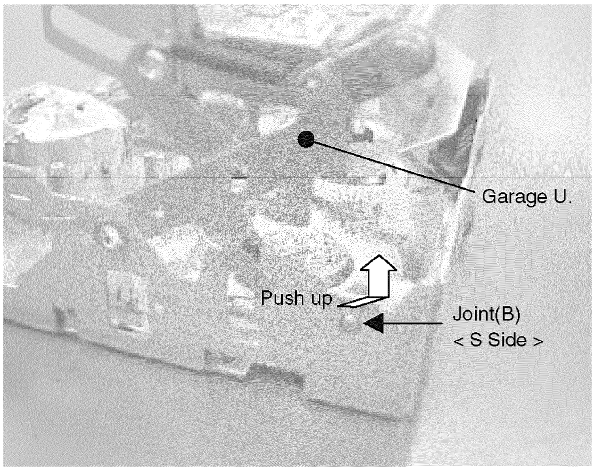

Garage U.
Push up
Joint(B)
< S Side >

Fig. 3-2

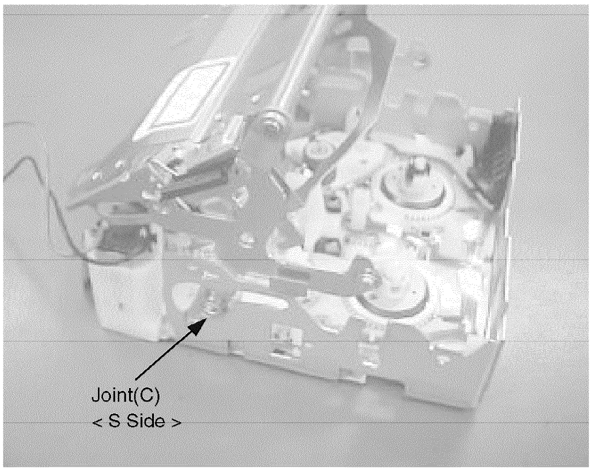

Joint(C)
< S Side >

Fig. 4

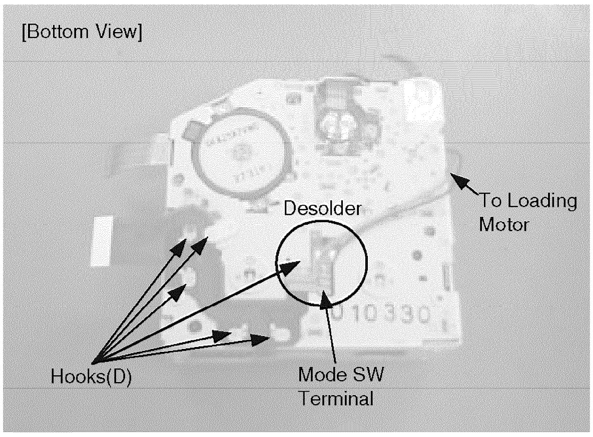

[Bottom View]
Desolder
To Loading
Motor
Hooks(D)
Mode SW
Terminal

Fig. 5-1

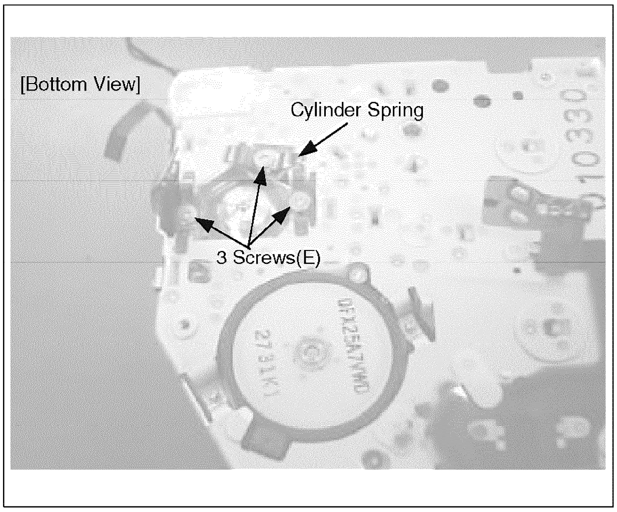

[Bottom View]
Cylinder Spring
3 Screws(E)

Fig. 5-2

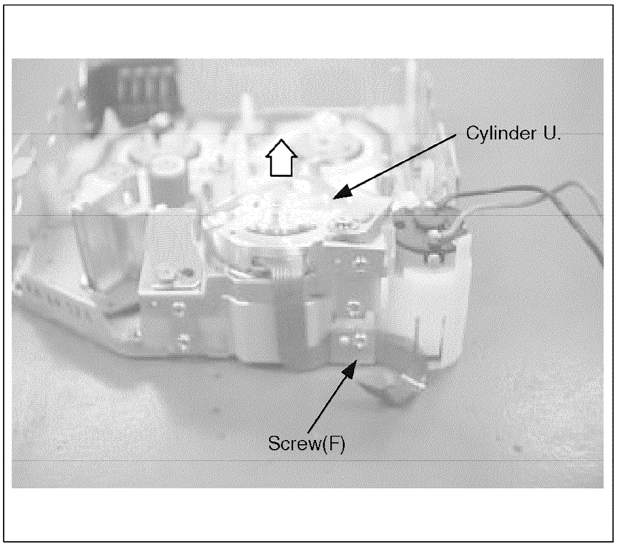

Cylinder U.
Screw(F)

Fig. 6

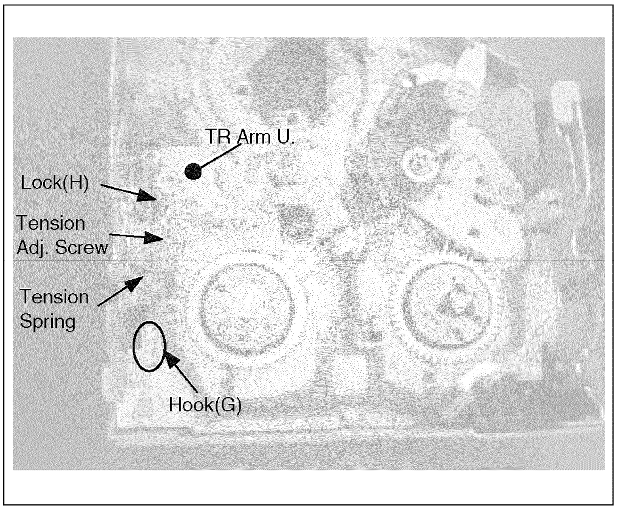

TR Arm U.
Lock(H)
Tension
Adj. Screw
Tension
Spring
Hook(G)

Fig. 7-1

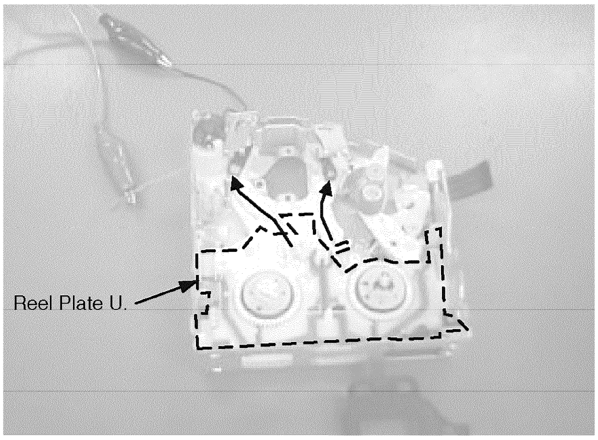

Reel Plate U.

Fig. 7-2

1) Insert screw driver under Reel Plate for upward pressure.
2) Release Lock(I),(J),(K),(L).

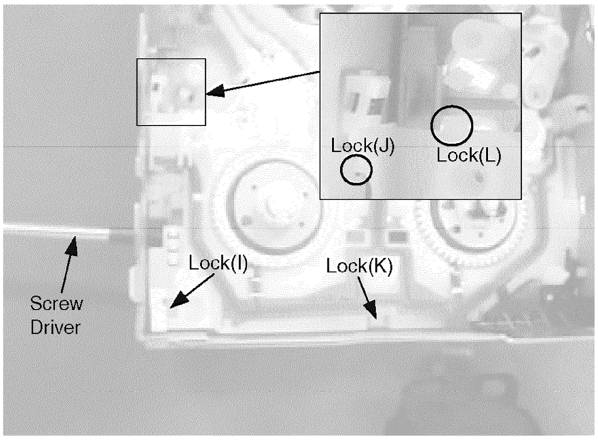

Lock(J)
Lock(L)
Lock(I)
Lock(K)
Screw Driver

Fig. 7-3

1) Keep releasing Lock(L), then turn the Mechanism U. upside down with screw driver inserted (to apply downward pressure to Reel Plate in this condition).
2) Release Lock(M), (N), (O), (P) (*Lock(M) first)

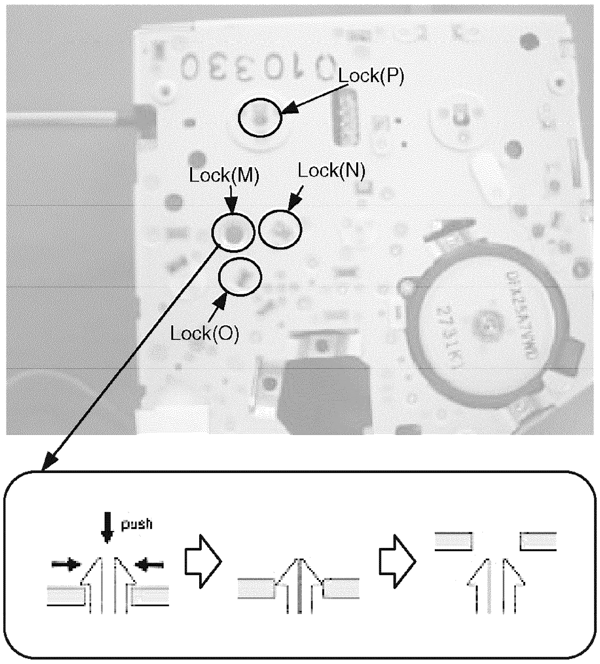

Lock(P)
Lock(M)
Lock(N)
Lock(O)
push

Fig. 7-4

1) Turn the mechanism U.
2) Release Lock(Q).

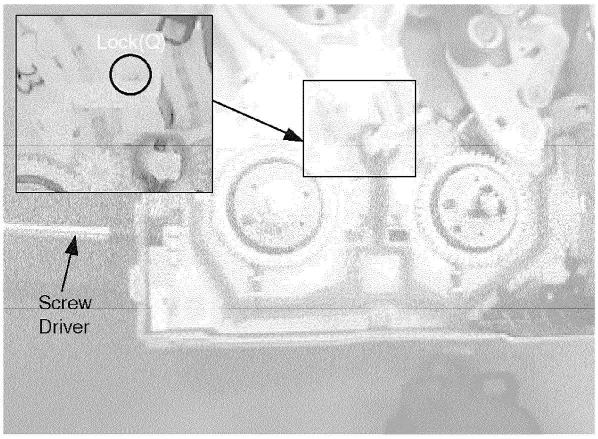

Lock(Q)
Screw Driver

Fig. 7-5

1) Turn the mechanism U. again.
2) Release Lock(R), (S).

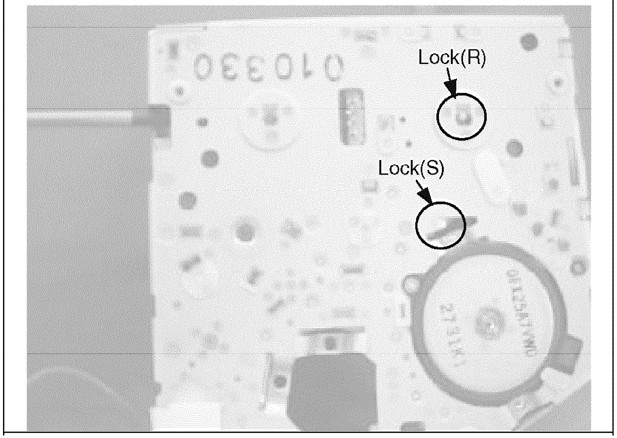

Lock(R)
Lock(S)

Fig. 7-6

1) Turn the mechanism U. again.
2) Take Reel Plate U. (slide and lift up).
(*Be careful for handling flat cable.)

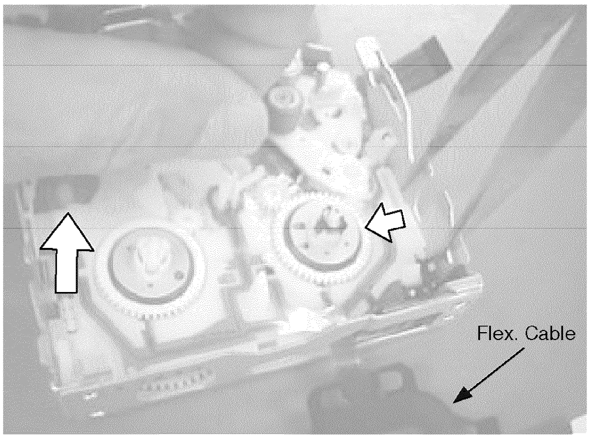


Fig. 8

1) Make slightly unloading with 3V battery until Pinch Arm comes off the Capstan Shaft.
2) Release Lock(T).

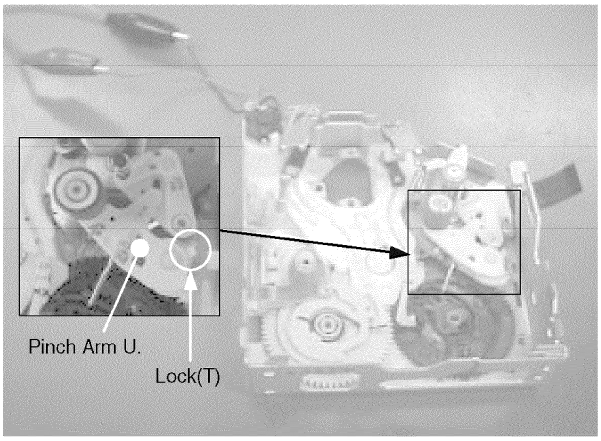

Pinch Arm U.
Lock(T)

Fig. 9

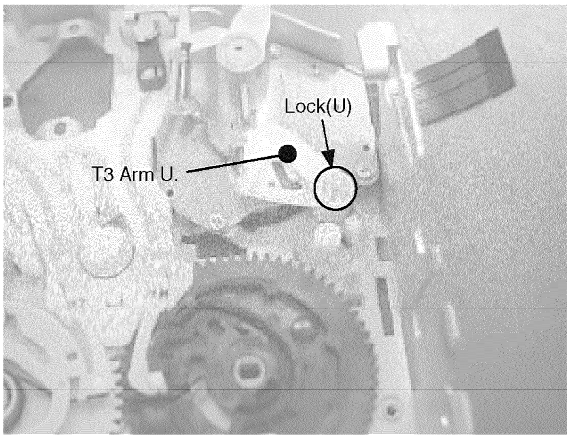

Lock(U)
T3 Arm U.

Fig. 10

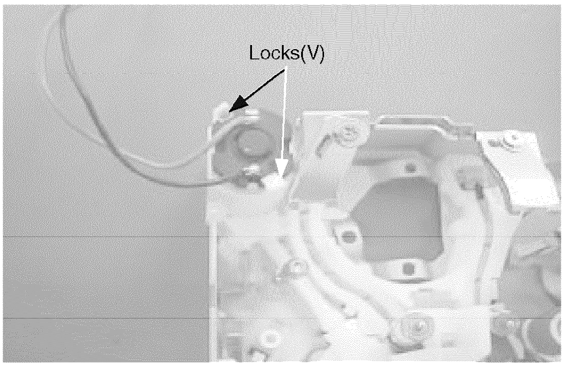


Fig. 11

```
NOTATION PUBLIC "-//ALDUS//NOTATION TAGGED IMAGE FILE FORMAT//EN"
ENTITY SYSTEM "d_11.tif"
```

Fig. 12

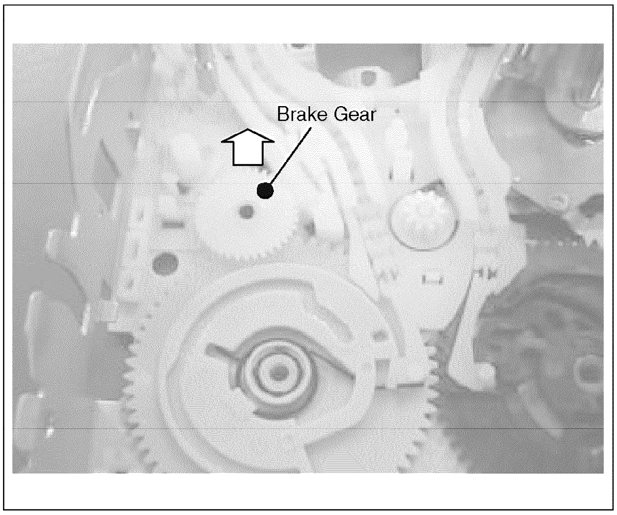


Fig. 13

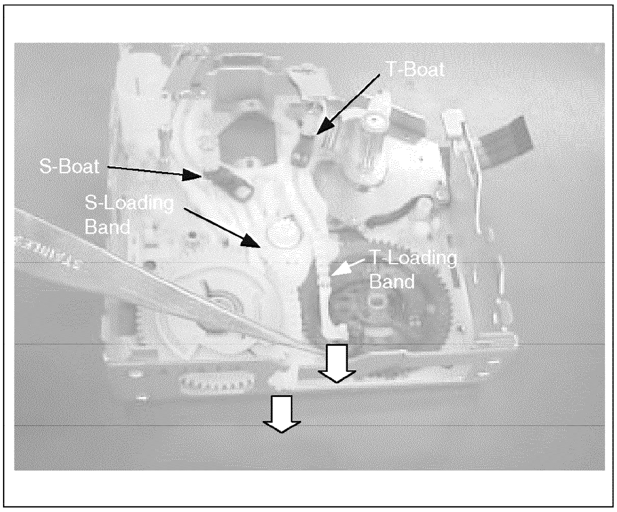

T-Boat
S-Boat
S-Loading Band
T-Loading Band

Fig. 14

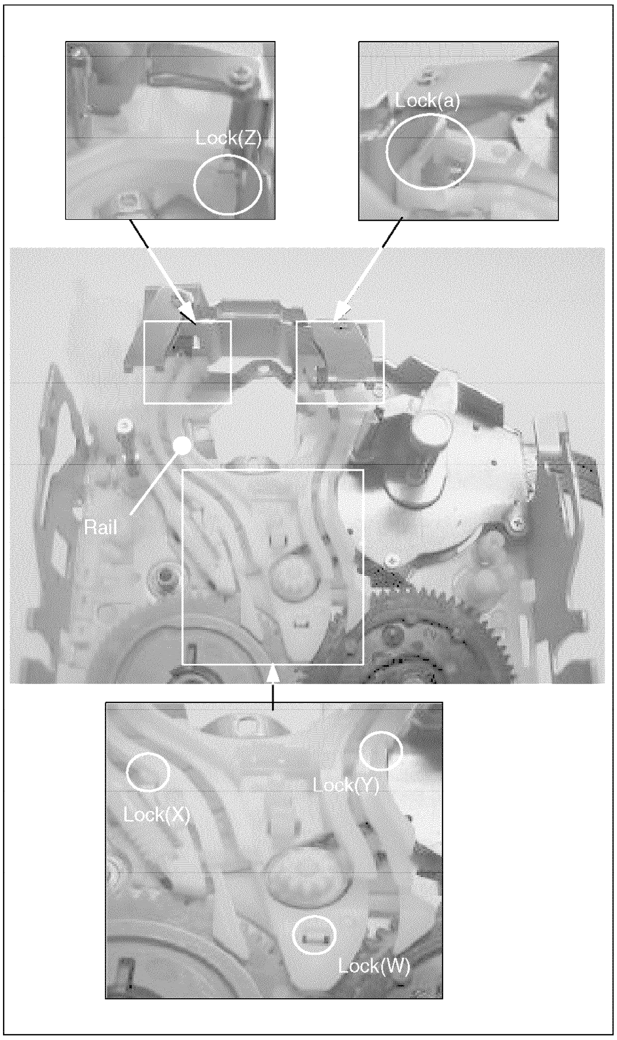

Lock(Z)
Lock(a)
Rail
Lock(X)
Lock(Y)
Lock(W)

Fig. 15

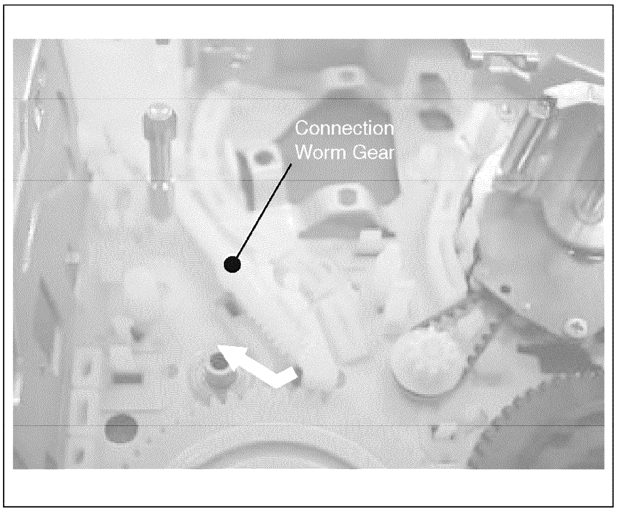
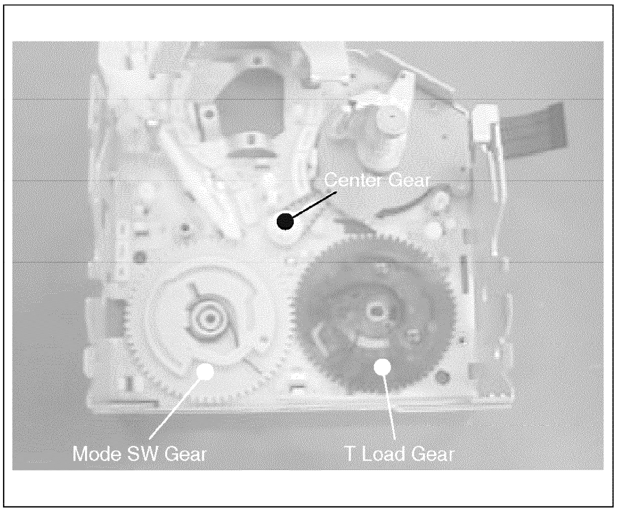

Connection
Worm Gear

Fig. 16



4. ASSEMBLY PROCEDURE

No.	Item	Fig.	Oil & Grease	Procedure
1	Center Gear	Fig. 1	-	Install Center Gear
2	Mode SW Gear		Grease	Install Mode SW Gear
3	T Load Gear	Fig. 2	Grease	Install T-Load Gear so that triangle phase marks on Mode SW and T Load Gears meet each other.
4	Rail	Fig. 3	-	Install Rail and fix it with 5 Locks(W), (X), (Y (Z) and (a)
5	Connection Worm		Grease	Install Connection Worm
6	S-Boat U. & S-Post Loading Band	Fig. 4	Oil / Grease	1) Install S and T-Boats together with Loadi Band / 2) Connect S-Loading Band to Mode and T-Loading Band to / T-Load Gear
7	T-Boat U. & T-Post Loading Band			
8	Brake Gear	Fig. 5	-	Install Brake Gear
9	TR Rod	Fig. 6	-	Install TR Rod
10	Loading Motor U.	Fig. 7	Grease	Install Loading Motor
11	T3 Arm U.	Fig. 8	-	Install T3 Arm U.
12	Pinch Arm U.	Fig. 9	-	Install Pinch Arm U.
13	Reel Plate U.	Fig. 10-1	-	Confirm Idler position and set it into Reel Pl U.
		Fig. 10-2	Grease	Install Reel Plate U.
		Fig. 10-3	-	Fix Reel Plate U. with 11 Locks(I), (J), (K), (L (M), (N), (O), (P), (Q), (R) and (S)
		Fig. 10-4	-	Fix Flex. Cable with 6 Hooks(D)

No.	Item	Fig.	Oil & Grease	Procedure
14	**TR Band & TR Arm U.**	**Fig. 11-1**	**-**	**Connect TR Arm and TR Band**
		Fig. 11-2	**-**	**1) Make full unloading condition with 3V bat / 2) Install TR Arm U.**
		Fig. 11-3	**-**	**Adjust Tension**
		Fig. 11-4	**-**	
		Fig. 11-5	**-**	
15	**Cylinder U.**	**Fig. 12-1**	**-**	**1) Make full unloading condition with 3V bat / 2) Install Cylinder U.**
		Fig. 12-2	**-**	**Turn the mechanism and install Cylinder Spring, then tighten 3 screws(E)**
		Fig. 12-3	**-**	**Tighten 1 screw(F) for Cylinder Flex. Cable**
16	**Mechanism Flexible Cable**	**Fig. 13**	**-**	**Solder each terminal**
17	**Garage U.**	**Fig. 14-1**	**Oil**	**1) Engage joints(C) at S and T sides (*T side first).**
		Fig. 14-2	**-**	**2) Engage joints(B) at both S and T sides**
18	**Dumper**	**Fig. 15**	**-**	**Install Dumper**

The following parts should be applied the Oil (VFK1700) or Grease (VFK1298A).

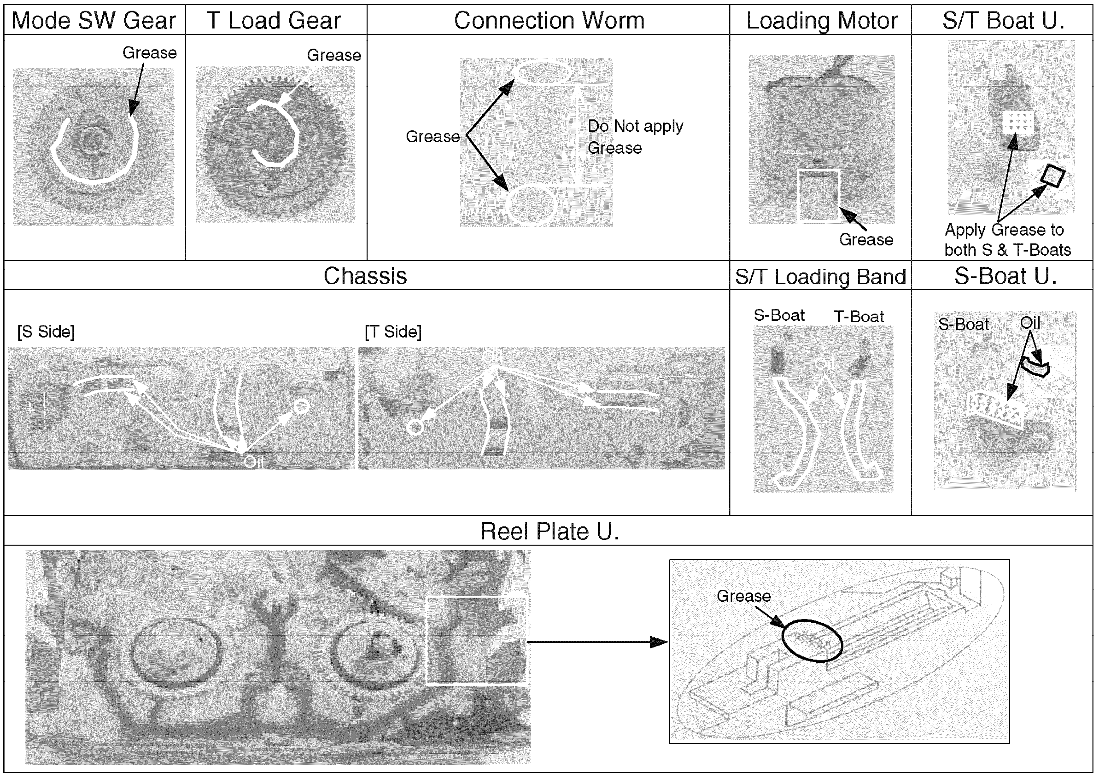

Mode SW Gear
Grease
T Load Gear
Grease
Connection Worm
Grease
Do Not apply Grease
Loading Motor
Grease
S/T Boat U.
Apply Grease to both S & T-Boats
Chassis
[S Side]
Oil
[T Side]
Oil
S/T Loading Band
S-Boat
T-Boat
Oil
S-Boat U.
S-Boat
Oil
Reel Plate U.
Grease

Fig. 1

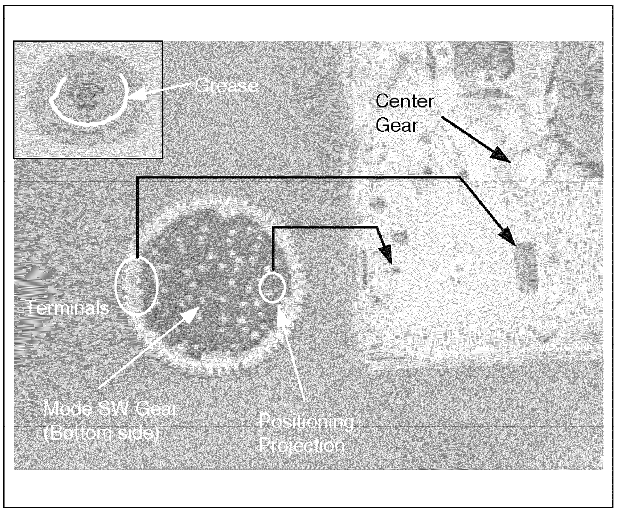

Grease
Center Gear
Terminals
Mode SW Gear (Bottom side)
Positioning Projection

Fig. 2

1) Install T-Load Gear so that triangle phase marks on Mode SW and T Load Gears meet to each other.

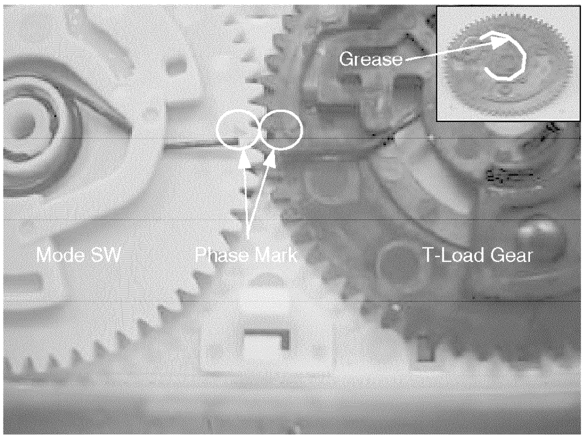

Grease
Mode SW
Phase Mark
T-Load Gear

Fig. 3

1) Install Rail and fix it with 5 Locks(W), (X), (Y), (Z) and (a).
2) Install Connection Worm.

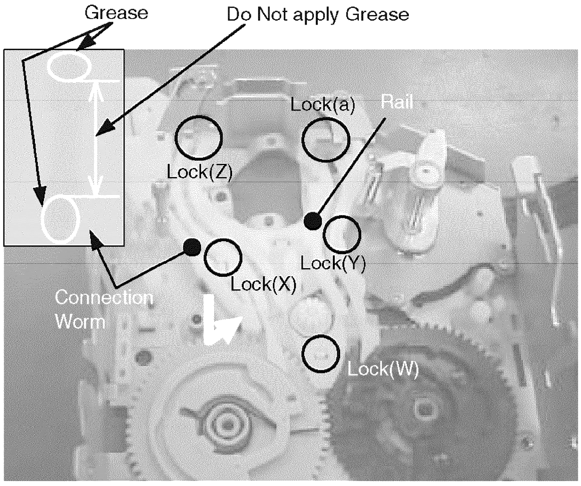
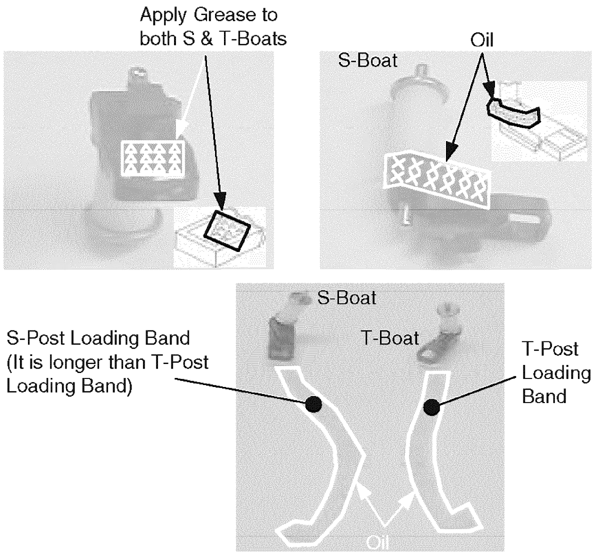
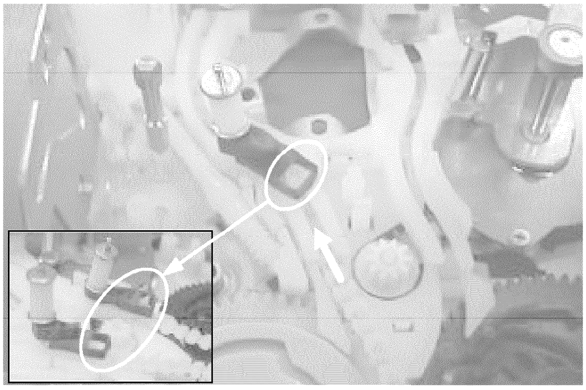

Grease
Do Not apply Grease
Lock(a)
Rail
Lock(Z)
Lock(Y)
Lock(X)
Connection Worm
Lock(W)

Fig. 4


Apply Grease to both S & T-Boats
Oil
S-Boat
S-Boat
T-Boat
S-Post Loading Band (It is longer than T-Post Loading Band)
T-Post Loading Band
Oil

1) Install S and T Boats together with Loading Band and set full loading condition.



2) Connect S-Loading Band to Mode SW and T-Loading Band to T-Load Gear.

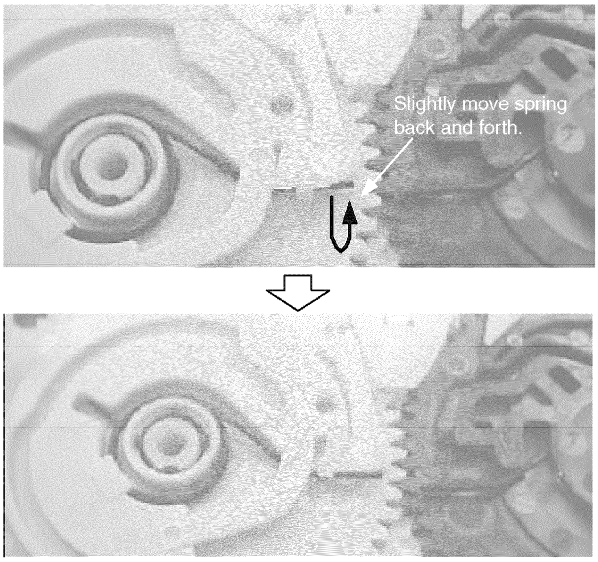

Slightly move spring back and forth.

Fig. 5

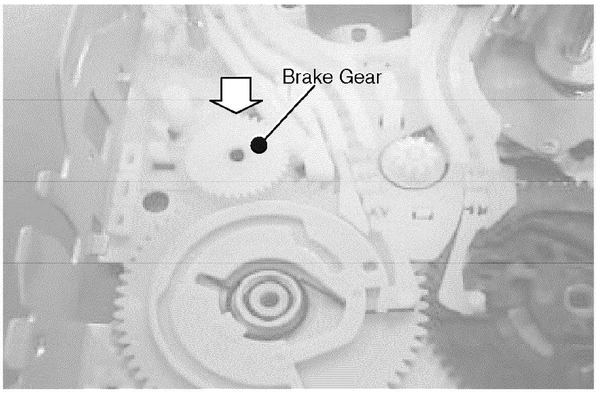


Fig. 6

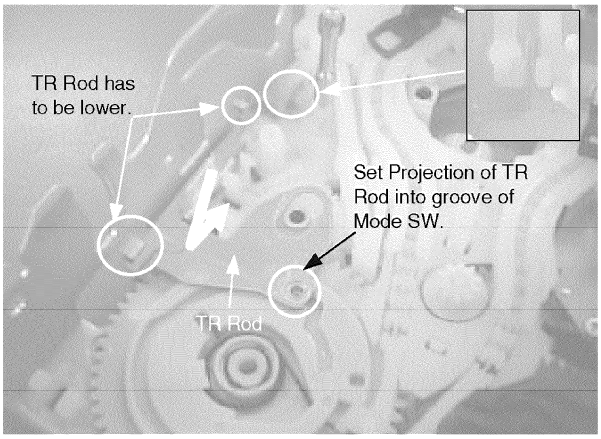

TR Rod has
to be lower.
Set Projection of TR
Rod into groove of
Mode SW.
TR Rod

Fig. 7

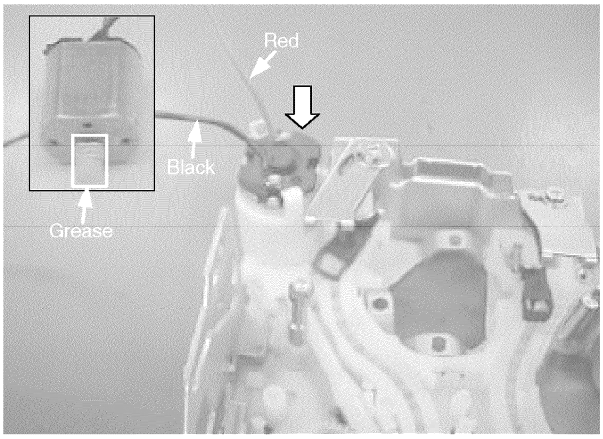

Red
Black
Grease

Fig. 8

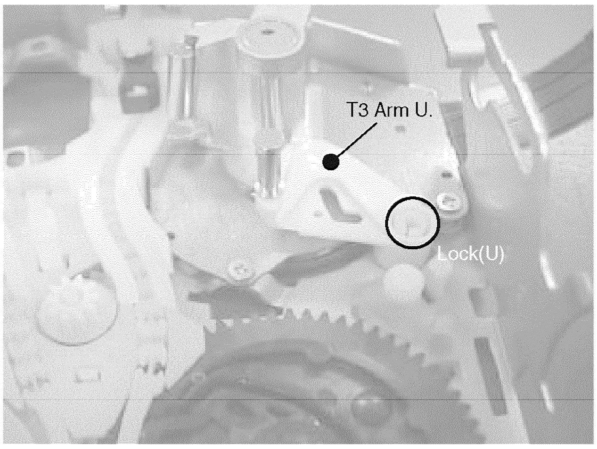

T3 Arm U.
Lock(U)

Fig. 9

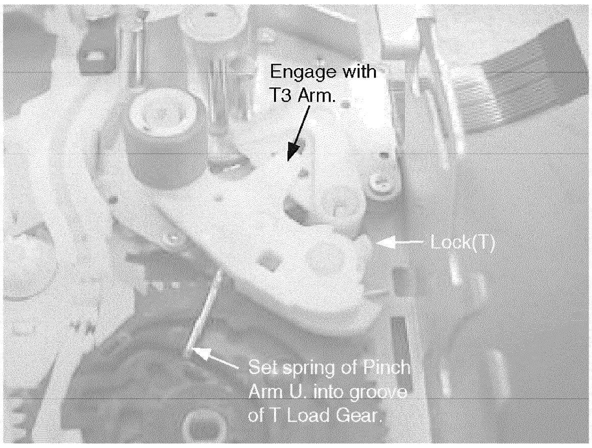

Engage with T3 Arm.
Lock(T)
Set spring of Pinch Arm U. into groove of T Load Gear.

Fig. 10-1

1) Confirm Idler position and set it into Reel Plate U. if necessary.

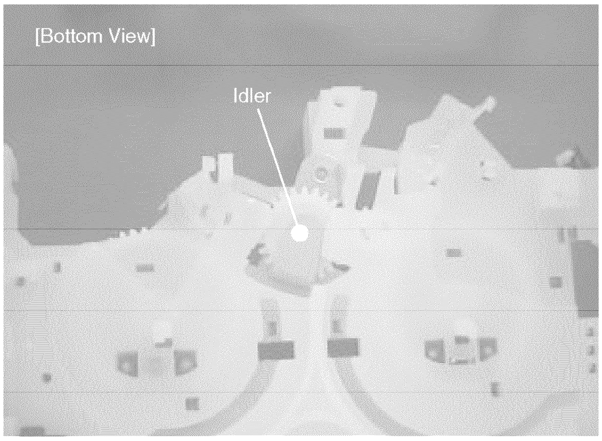

[Bottom View]
Idler

Fig. 10-2

Note:
Before installing Reel Plate U., confirm that triangle phase marks on Mode SW and T-Load Gears are meeting to each other.
If not, align the phase marks again.

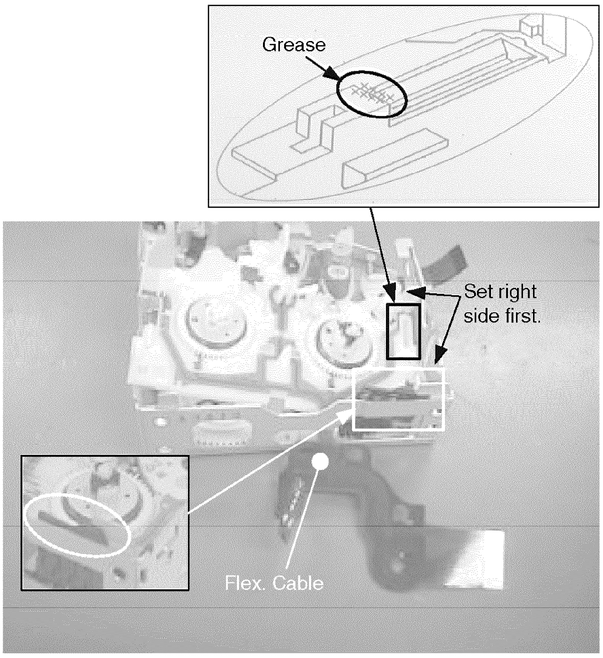
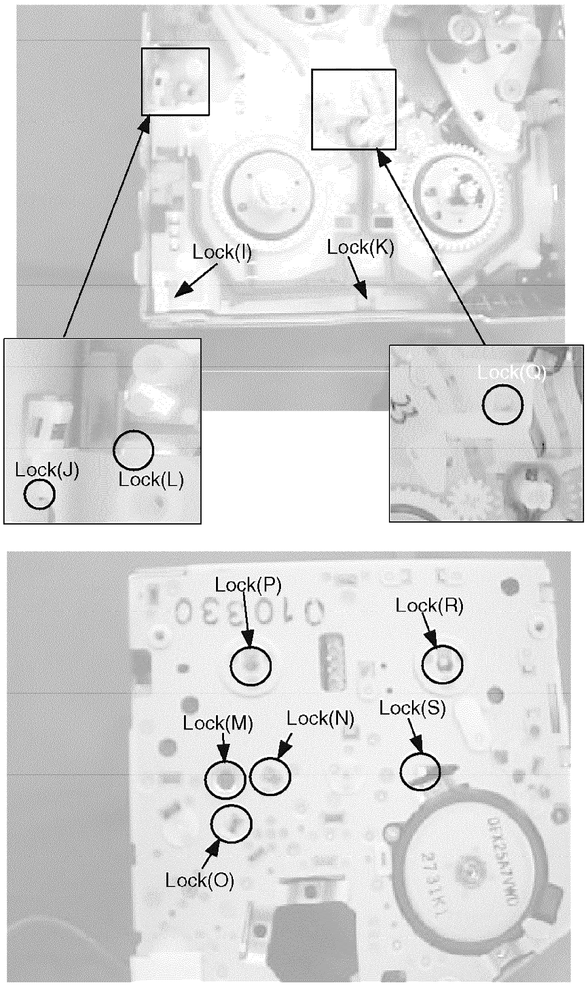

Grease
Set right side first.
Flex. Cable

Fig. 10-3

1) Fix Reel Plate U. with 11 Locks(I), (J), (K), (L), (M), (N), (O), (P), (Q), (R) and (S).


Lock(I)
Lock(K)
Lock(J)
Lock(L)
Lock(Q)
Lock(P)
Lock(R)
Lock(M)
Lock(N)
Lock(S)
Lock(O)

Confirm the smooth movement of Idler by rotating Capstan Rotor manually.

Fig. 10-4

1) Fix Flex. Cable with 6 Hooks(D).

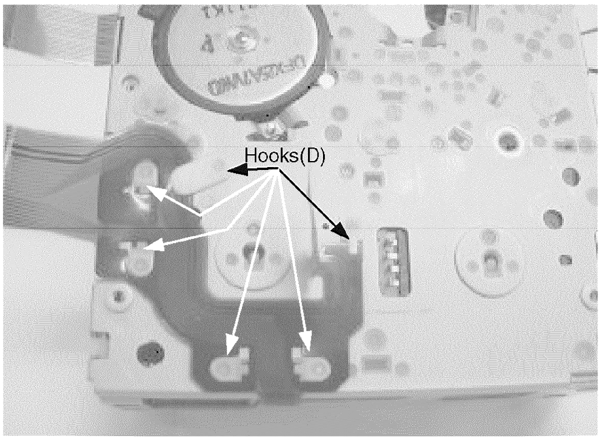


Fig. 11-1

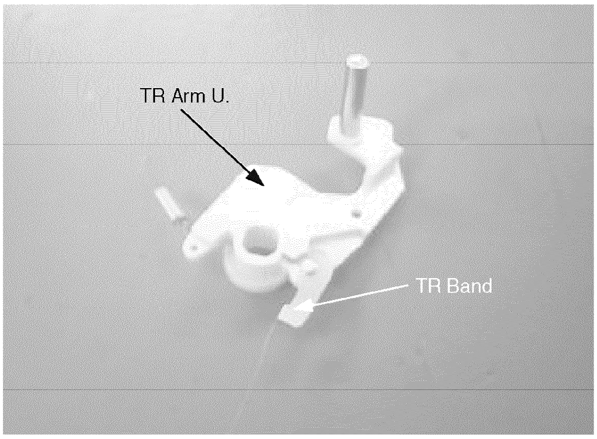

TR Arm U.
TR Band

Fig. 11-2

1) Make full unloading condition with 3V battery.
2) Install TR Arm U. and fix it with Lock(H).
   Note: Confirm the position of TR Arm U.
3) Slightly tighten Tension Adj. Screw.
   Note: Do not fully tighten Tension Adj. Screw.
4) Hook Tension Spring to the original position.

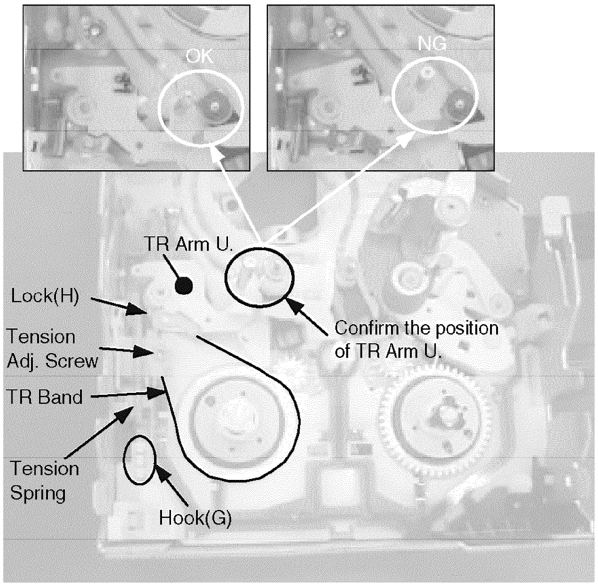

OK
NG
TR Arm U.
Lock(H)
Tension Adj. Screw
TR Band
Tension Spring
Hook(G)
Confirm the position of TR Arm U.

Fig. 11-3

[Tension Adjustment]

1) Move the mechanism position in the Play mode with 3V battery.(Play mode: Pinch Roller just touch to the capstan shaft.)

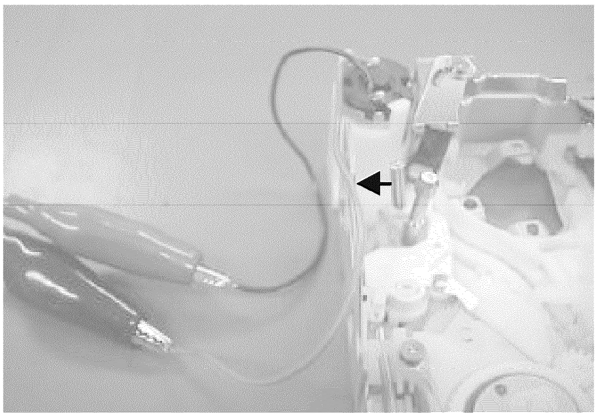
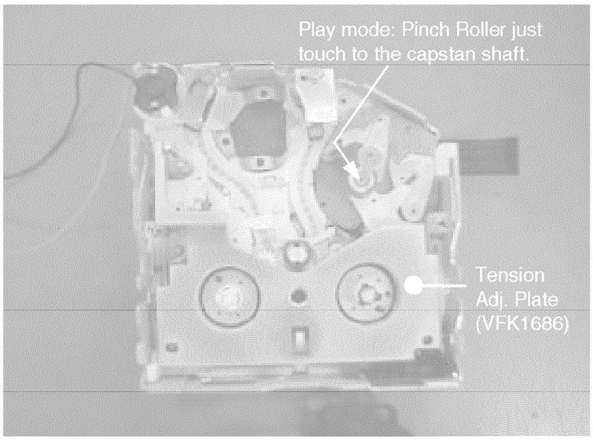


Fig. 11-4

2) Set the Tension Adj. Plate into the mechanism.



Play mode: Pinch Roller just touch to the capstan shaft.

Fig. 11-5

3) Slowly turn Tension Adj. Screw counterclockwise the left edge of TR Arm shaft comes within the specification.

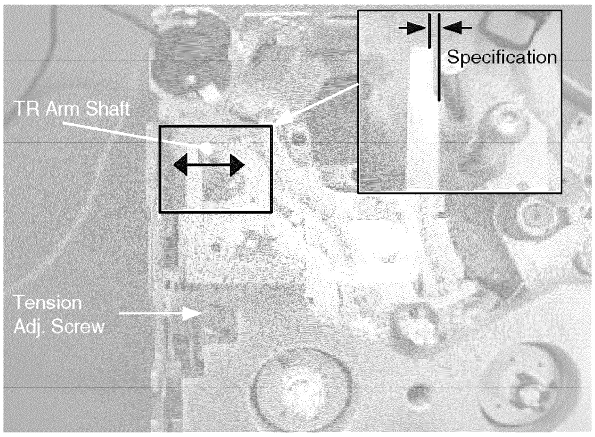

Specification
TR Arm Shaft
Tension
Adj. Screw

Fig. 12-1

1) Make full unloading condition with 3V battery.
2) Install Cylinder U.

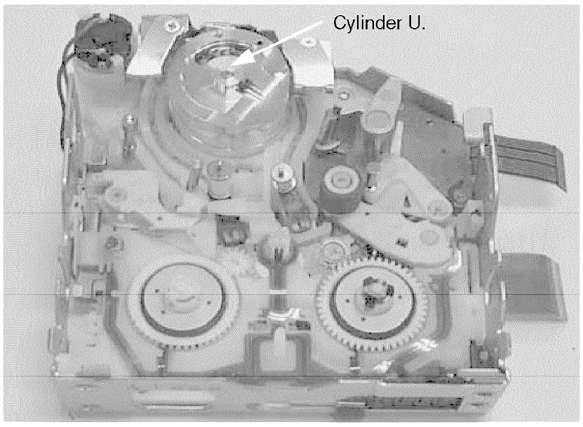


Fig. 12-2

3) Turn the mechanism and install Cylinder Spring, then tighten 3 screws(E).

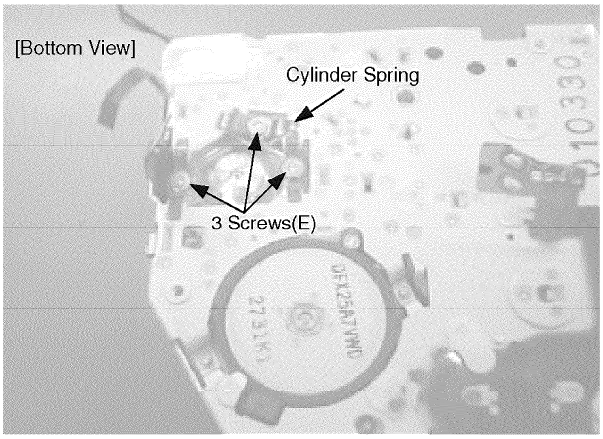

[Bottom View]
Cylinder Spring
3 Screws(E)

Fig. 12-3

4) Tighten 1 screw(F) for Cylinder Flex. Cable.

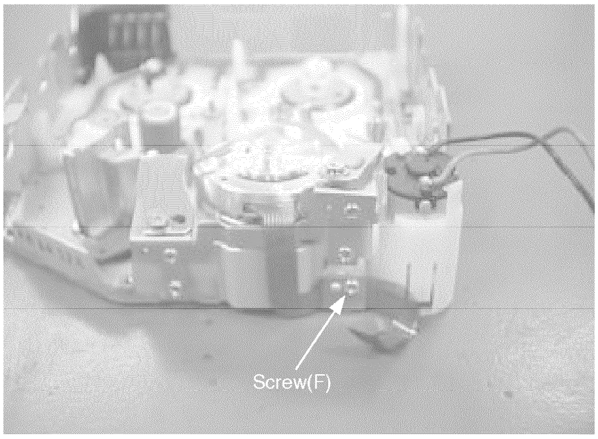


Fig. 13

1) Solder Mode SW terminal and Loading Motor Cable.

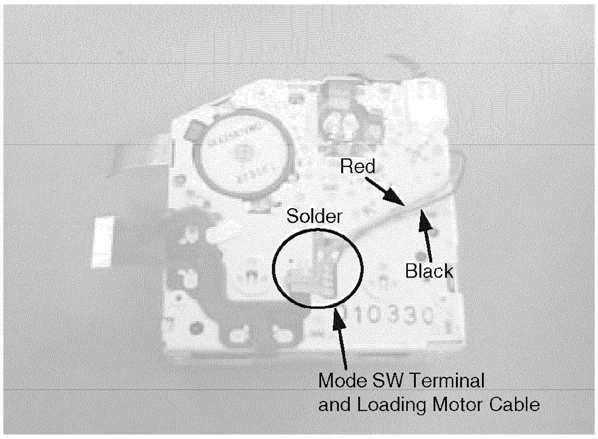

Red
Solder
Black
Mode SW Terminal
and Loading Motor Cable

Fig. 14-1

1) Apply Oil to chassis, then engage joints(C)
at both S and T sides (*T side first).

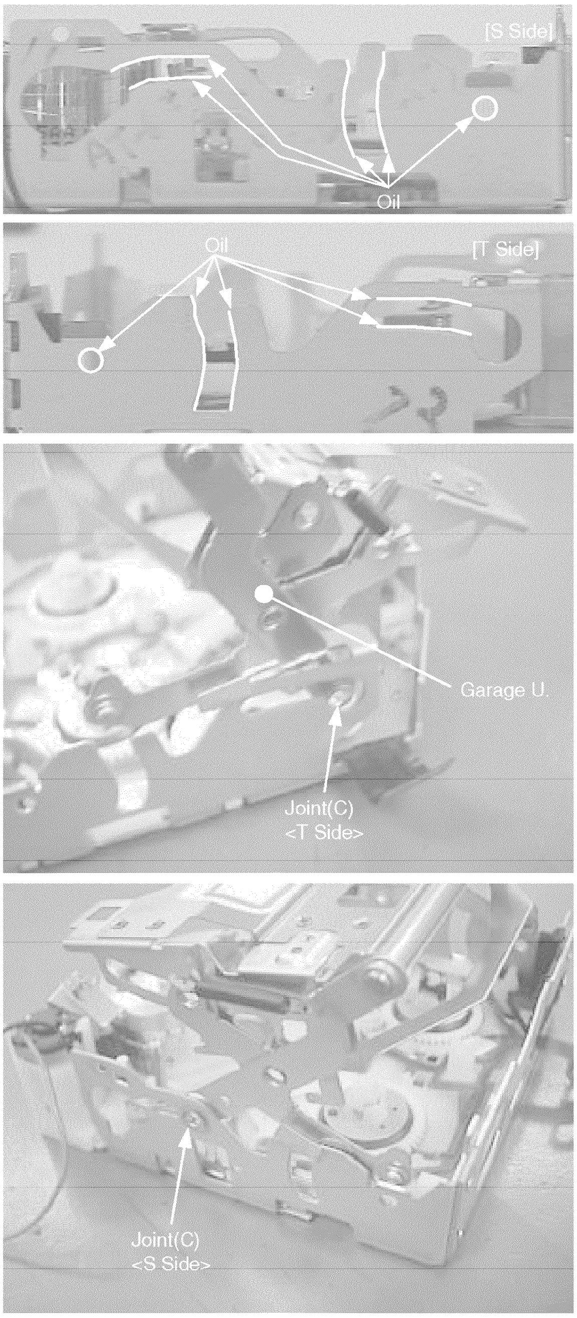

[S Side]
Oil
[T Side]
Oil
Garage U.
Joint(C)
<T Side>
Joint(C)
<S Side>

Fig. 14-2

2) Engage joints(B) at both S and T sides.

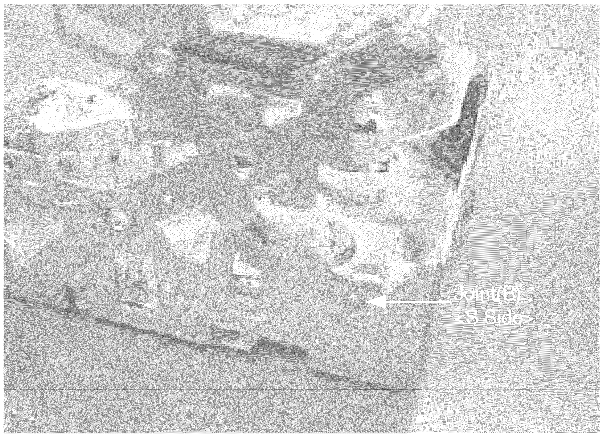
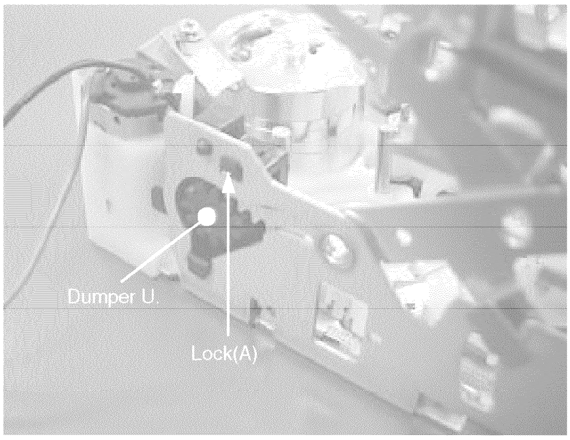
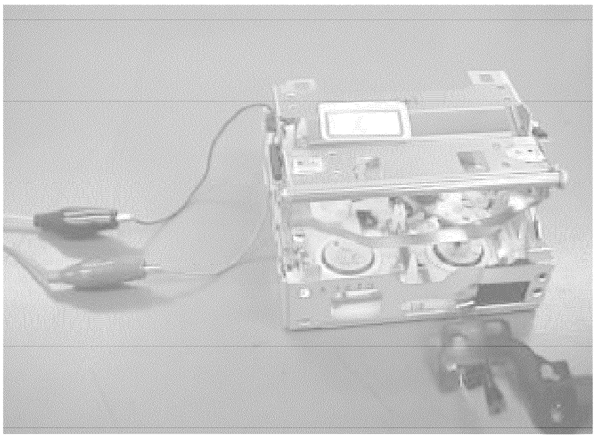


Fig. 15

1) Install Dumper U. and fix with Lock(A).



2) Make slightly loading with 3V battery to lower down the Garage U.



Note:
Finally, confirm the mechanical movement with 3V battery.

5. MECHANICAL ADJUSTMENT

5.1. ADJUSTMENT TABLE

When each mechanical part as below will be replaced, each adjustment must be done.
" O " mark in the foolowing table means that it is necessary to adjust.
" --- " mark in the following table means that it is unnecessary to adjust.

Part Name	Confirmation of Tape Running	Linearity Adjustment	Sensor Sensitivity Adjustment	Confirmation of B.E.R. Value	Tension Adjustment
MECHA. CHASSIS	---	---	---	O	---
MECHA. CHASSIS (1) U.	O	O	---	O	---
DUMPER U.	---	---	---	O	---
GARAGE U.	---	---	---	O	---
CYLINDER U.	---	O	---	O	---
CYLINDER SPRING	---	O	---	O	---
TR ARM	O	---	---	O	O
TR BAND	---	---	---	O	O
TENSION SPRING	---	---	---	O	O
REEL PLATE U.	---	---	O	O	O
IDLER U.	---	---	---	O	O
PINCH ARM U.	O	---	---	O	O
T3 ARM U.	O	---	---	O	O
LOADING MOTOR U.	---	---	---	O	---
TR ROD	---	---	---	O	O
BRAKE GEAR	---	---	---	O	O
S-BOAT U.	O	---	---	O	O
T-BOAT U.	O	---	---	O	O
S-POST LOADING BAND	O	---	---	O	O
T-POST LOADING BAND	O	---	---	O	O
RAIL	---	---	---	O	O
CONNECTION WORM	---	---	---	O	O
MODE SW U.	---	---	---	O	O
T LOAD GEAR U.	---	---	---	O	O
CENTER GEAR	---	---	---	O	O

5.2. ADJUSTMENT PROCEDURE

No.	Item	Procedure	
1	Confirmation of Tape Running	Equipment	1. Mini DV Cassette
		Specification	Refer to Fig. 1-1 and Fig. 1-2
		1) Confirm each post position in playback mode. (Fig. 1-1) 2) Confirm condition of tape regulation of each post in playba and review modes. / (Fig. 1-2)	
2	Linearity Adjustment	Equipment	1. DV Alignment Tape (VFM3110EDS) 2. ENV Detector Board (VFK1641) 3. Mesuring Board (VFK1308E) 4. 232C(M3) I/F Cable (VFK1395) 5. EVR Connector Board (VFK1309) 6. ConnectionAdaptor (VFK1309EX) 7. 30 pin Flat Cable(X2) (VFK1317 or VFK1511) 8. DC Output Cable (VJA0941) 9. Personal Computer
		Specification	Refer to Fig. 2-5
		1) Connect the cables and boards between camera unit and P (Fig. 2-1) 2) Connect the ENV Detector Board between Mesuring Board Oscilloscope. / (Fig. 2-2) 3) Remove the Adjustment Cover. (Fig. 2-3) 4) Playback the Alignment Tape. 5) Adjust S1 and/or T1 posts by screw driver until waveformis spec. (Fig. 2-4, Fig. 2-5) 6) After Linearity adjustment, B.E.R. value should be confirme by using Tatsujin / AdjustmentKit.	
3	Sensor Sensitivity Adjustment	Refer to Tatsujin Adjustment.	
4	Confirmation of B.E.R. Value	Refer to Tatsujin Adjustment.	
5	Tension Adjustment	Refer to TR Band & TR Arm U. assembly section of this manu	

Fig. 1-1

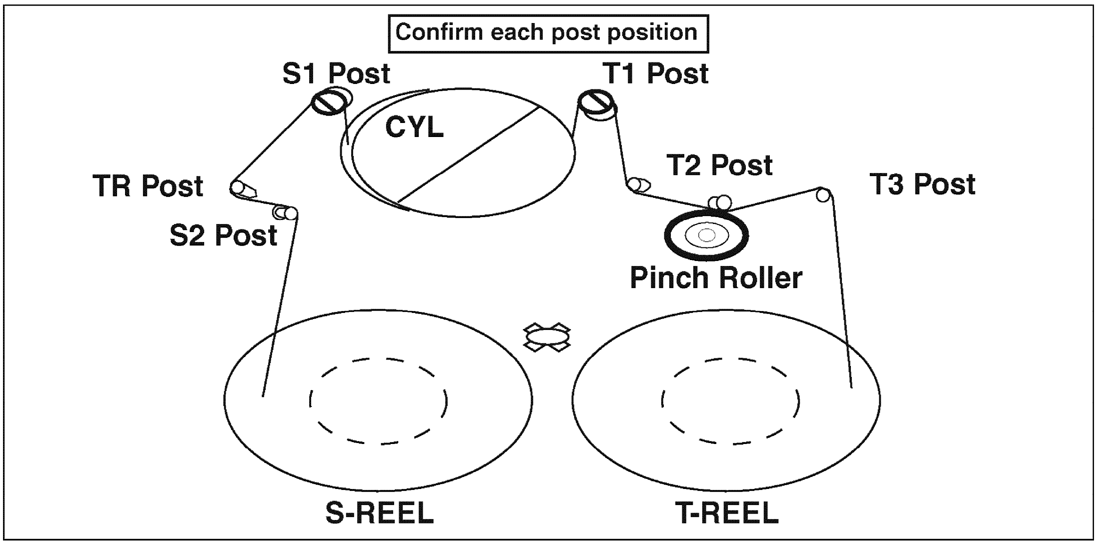
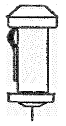
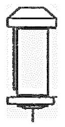
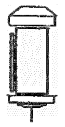
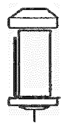
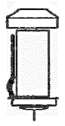
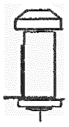
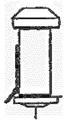


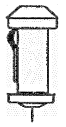
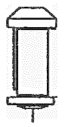
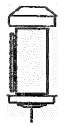
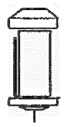
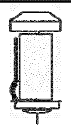
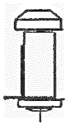
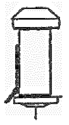
Fig. 1-2

PLAYBACK MODE

	Condition of Tape Regulation						
	A	B	C	D	E	F	G
	Upper Curl	Upper Regulation	Center Regulation	Lower Regulation	Lower Curl	Edge Bending	Edge Slacking
							
S2 POST	NG	NG	**OK**	**OK**	NG	NG	NG
S1 POST	NG	**OK**	NG	NG	NG	NG	NG
T1 POST	NG	**OK**	NG	NG	NG	NG	NG
T3 POST	NG	NG	**OK**	NG	NG	NG	NG

*S1 and T1 Posts can be adjusted. (Refer to Linearity Adjustment)

REVIEW MODE

	Condition of Tape Regulation						
	A	B	C	D	E	F	G
	Upper Curl	Upper Regulation	Center Regulation	Lower Regulation	Lower Curl	Edge Bending	Edge Slacking
							
S2 POST	NG	NG	**OK**	**OK**	NG	NG	NG
S1 POST	NG	**OK**	NG	NG	NG	NG	NG
T1 POST	NG	**OK**	**OK**	**OK**	NG	NG	NG
T3 POST	NG	**OK**	**OK**	**OK**	NG	NG	NG

*S1 and T1 Posts can be adjusted. (Refer to Linearity Adjustment)

Fig. 2-1

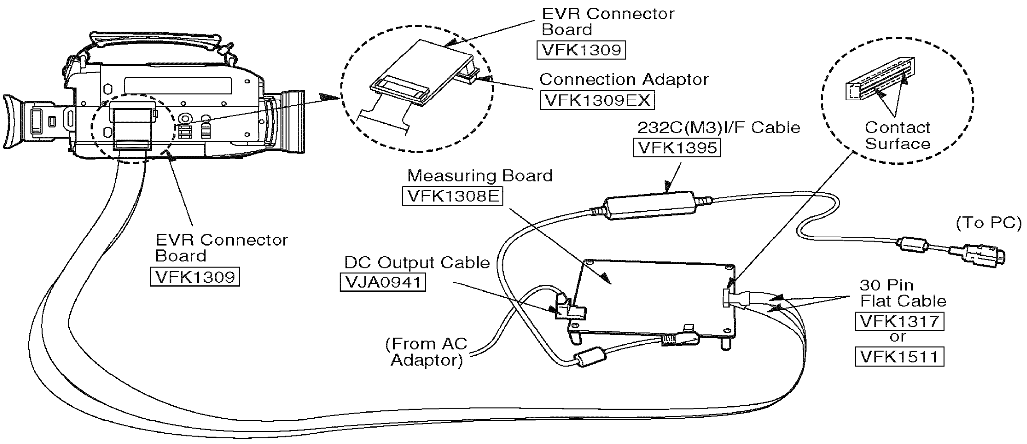

EVR Connector Board
VFK1309
Connection Adaptor
VFK1309EX
232C(M3)I/F Cable
VFK1395
Contact Surface
Measuring Board
VFK1308E
(To PC)
EVR Connector Board
VFK1309
DC Output Cable
VJA0941
30 Pin Flat Cable
VFK1317
or
VFK1511
(From AC Adaptor)

Fig. 2-2

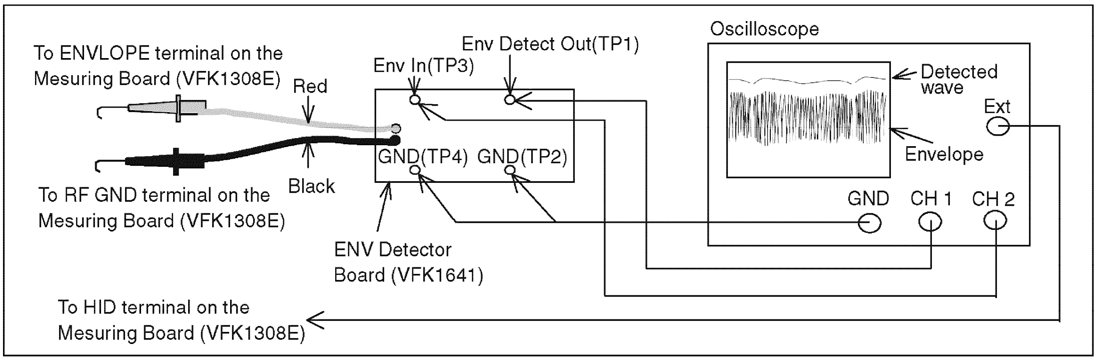

To ENVLOPE terminal on the
Mesuring Board (VFK1308E)
Red
Black
To RF GND terminal on the
Mesuring Board (VFK1308E)
Env In(TP3)
Env Detect Out(TP1)
GND(TP4)
GND(TP2)
ENV Detector
Board (VFK1641)
Oscilloscope
Detected
wave
Ext
Envelope
GND
CH 1
CH 2
To HID terminal on the
Mesuring Board (VFK1308E)

Fig. 2-3

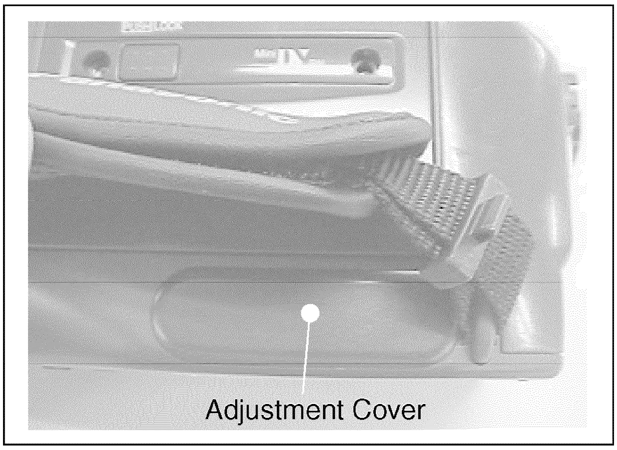

Adjustment Cover

Fig. 2-4

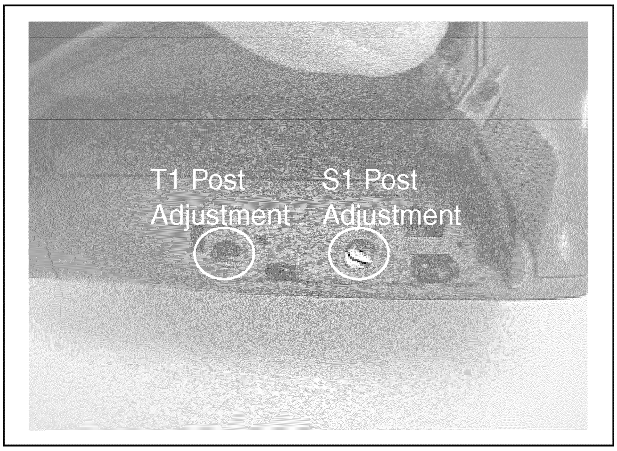
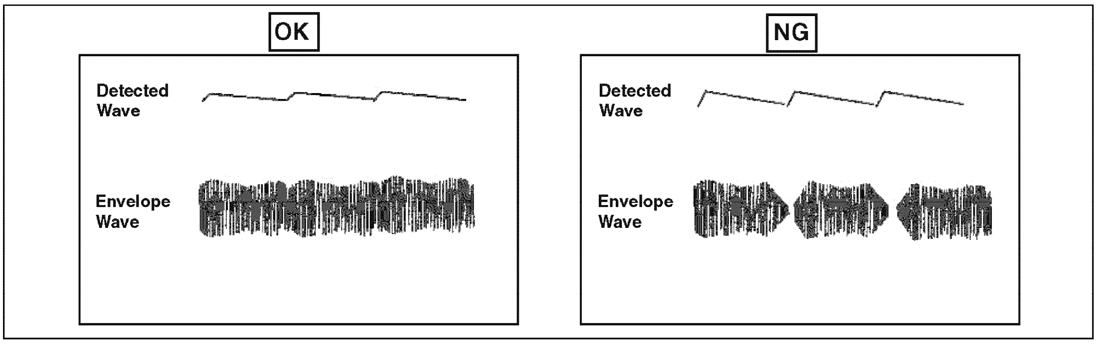
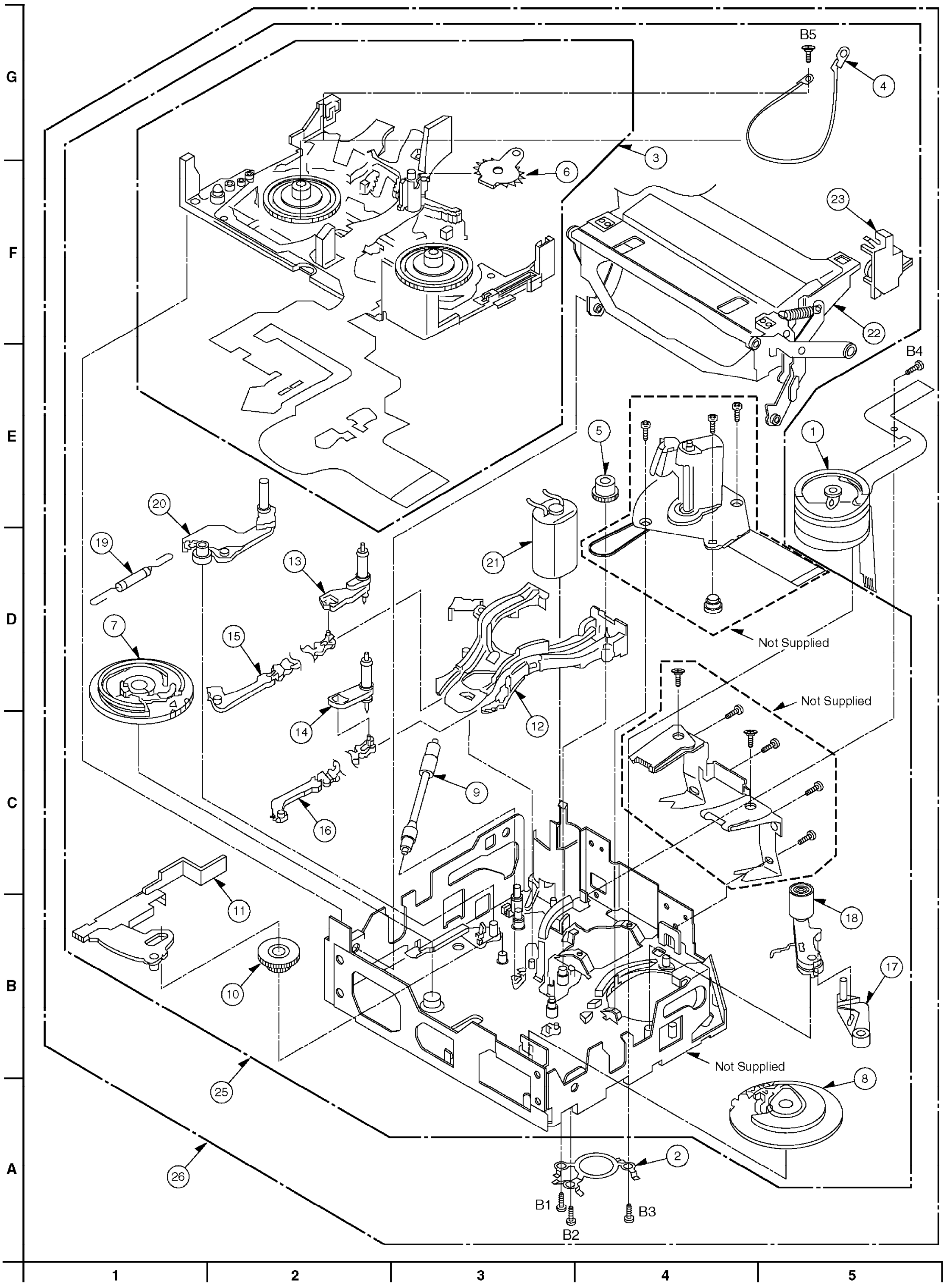

T1 Post
Adjustment
S1 Post
Adjustment

Fig. 2-5


OK
Detected
Wave
Envelope
Wave
NG
Detected
Wave
Envelope
Wave

6. EXPLODED VIEWS

6.1. VCR MECHANISM SECTION


G
F
E
D
C
B
A
B5
4
3
6
23
22
B4
5
1
20
19
21
13
Not Supplied
7
15
12
Not Supplied
14
9
16
11
18
17
10
Not Supplied
25
8
2
26
B1
B2
B3
1
2
3
4
5

7. REPLACEMENT PARTS LIST

7.1. VCR MECHANISM SECTION PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
1	**VEG1576**	**CYLINDER U.**	
2	**VMC1702**	**CYLINDER SPRING**	
3	**VXA6999**	**REEL PLATE U.**	
4	**VMC1701**	**TR BAND**	
5	**VDG1498**	**CENTER GEAR**	
6	**VXA6997**	**IDLER U.**	
7	**VXA7001**	**MODE SW U.**	
8	**VXA7002**	**T LOAD GEAR U.**	
9	**VDG1496**	**CONNECTION WORM**	
10	**VDG1497**	**BRAKE GEAR**	
11	**VMA0J34**	**TR ROD**	
12	**VMD4184**	**RAIL**	
13	**VXA6995**	**S-BOAT U.**	
14	**VXA6996**	**T-BOAT U.**	
15	**VMD4181**	**S-POST LOADING BAND**	
16	**VMD4182**	**T-POST LOADING BAND**	
17	**VXL3096**	**T3 ARM U.**	
18	**VXL3095**	**PINCH ARM U.**	
19	**VMB3510**	**TENSION SPRING**	
20	**VXL3092**	**TR ARM**	
21	**VEM0744**	**LOADING MOTOR U.**	
22	**VXA7003**	**GARAGE U.**	
23	**VXP2111**	**DUMPER**	
25	**VXY1629Z1**	**MECHA. CHASSIS (1) U.**	
26	**VXY1629**	**MECHA. CHASSIS**	**(RTL)**
B1	**VHD1428**	**SCREW**	
B2	**VHD1428**	**SCREW**	
B3	**VHD1428**	**SCREW**	
B4	**XQN14+B1FN**	**SCREW**	
B5	**VMS6968**	**SCREW**	